THE NATIONAL ELEMENTARY

Principal

Instructional Materials for Elementary Schools

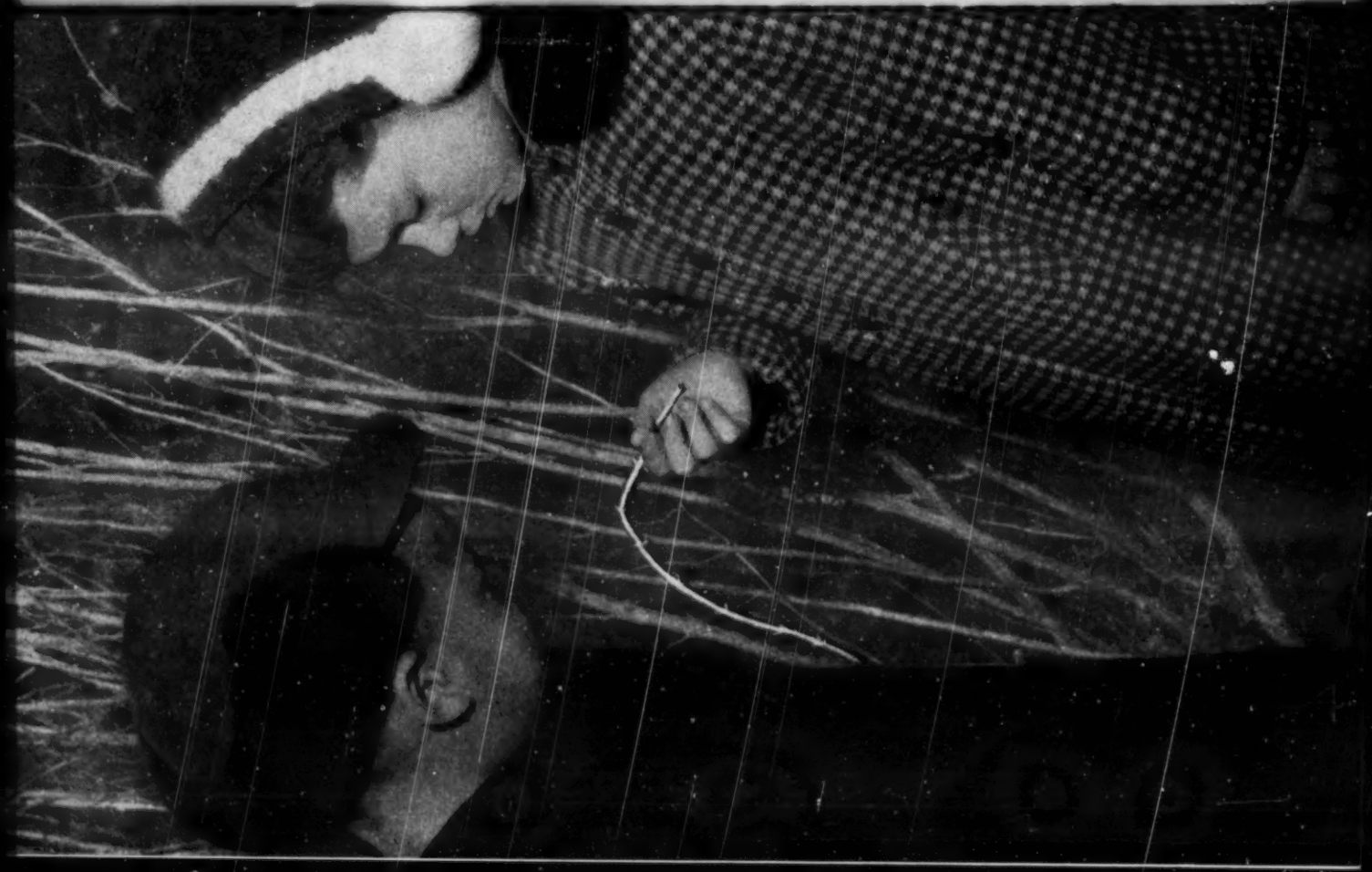
Instructional Materials for Elementary Schools

Frontispiece—

Will these buds become flowers?

Courtesy of Lillian B. Viner, Viceprincipal
Niagara Street School, Niagara Falls, New York
Photograph by Clare M. Armstrong

THIRTY-FIFTH YEARBOOK



Instructional Materials for Elementary Schools

THIRTY-FIFTH YEARBOOK

The National Elementary Principal

Bulletin of the Department of Elementary School Principals

National Education Association

Vol. XXXVI, No. 1 September 1956 Price $3.50

Quantity orders for shipment to one address at the following discounts: To bookstores and other agencies, 20 percent. To others ordering more than one copy: 2-9 copies, 10 percent; 10 or more copies, 20 percent. Transportation charges will be made on all orders not accompanied by funds in payment.

The National Elementary Principal

MAGAZINE OF THE DEPARTMENT OF ELEMENTARY SCHOOL PRINCIPALS, NEA

Published in September, October, November, December, February, April, and May by the Department of Elementary School Principals of the National Education Association of the United States.

All principals engaged in administration and supervision of schools with elementary grades (including assistant or vice-principals), persons actively engaged in educational research and the professional education of elementary school administrators are eligible for active membership in this Department. The payment of $5 dues entitles active members to attend all meetings of the Department, to hold office, to vote, and to receive the regular publications.

Associate membership may be had by all members of the National Education Association who are actively engaged in any phase of schoolwork by paying the regular membership fee of $5. They are entitled to all privileges except the right to vote and hold office.

Single copies of the Yearbook number, $3.50; single copies of the Annual Report and Membership Directory, $2.00; October, December, February, April, and May issues of the magazine, 60 cents each.

Entered as second class matter at the post office at Washington, D. C., under Act of March 3, 1879. Acceptance for mailing at special rate of postage provided for in Section 1103, Act of October 3, 1917, authorized December 18, 1922.

Executive and Editorial Offices, 1201 Sixteenth Street, Northwest, Washington 6, D. C.

(The contents of this magazine are listed in the Education Index)

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Foreword

In 1934 the Department of Elementary School Principals published *Aids to Teaching in the Elementary School*, its thirteenth yearbook. Since then, the whole field of instructional materials has expanded greatly. The variety of materials available has intensified the need for coordination of them and for a continuing critical examination of how they are used.

In view of the needs, the Yearbook Committee tried to develop a book that would serve to stimulate ideas about the problems of instructional materials. To a considerable extent the book also reflects the current status of the use of materials in the elementary schools because many of the articles report firsthand experiences. By the nature of its development then, the book is an outlet for expression rather than a document that carries recommended policy. The user must do his own thinking about the place that the ideas might take in his community.

The Yearbook Committee is indebted to many persons for their part in this effort. The thanks of the Committee go to all those who submitted manuscripts for consideration. Their efforts are sincerely appreciated.

Also, the Committee has enjoyed the full support and counsel of Robert W. Eaves, executive secretary of the Department of Elementary School Principals, and of Frank W. Hubbard, assistant executive secretary for information services, National Education Association.

For coordinating the work the Committee acknowledges the services of Victor Hornbostel, assistant director of the NEA Research Division. Others from the Research Division who helped were Beatrice Crump, Janet Frost, Ellen Marsh, Valdeane Rice, and Wally Anne Sliter. Jesse Cowdrick and Carrie Grimsley of the Editorial Service Section of the NEA Division of Publications provided assistance on publication problems. The art work was under the direction of Brooke B. Todd, Jr., of Ewin-Todd, Washington, D. C.

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CHAPTER
ONE

The Place of Instructional Materials

In this technological age, we tend sometimes to accept unquestioningly the value of instructional materials regardless of the way they might be used. There are occasions when books may represent uneconomical avenues to learning, when graphs may conceal meaning for some, and when viewing television may be a waste of time. There are other occasions when each of these types of materials may have a unique place.

Aware of the pitfalls, the Yearbook Committee, in planning this issue, tried to think in terms of children, content, and purposes. And within such a context to bring help to elementary-school principals in securing the best use of instructional materials, in selecting and bringing materials into schools, and in administering materials. This opening chapter makes a substantial beginning in bearing out the hopes of the Committee.

The first article introduces the Yearbook to the reader by pointing out the importance of "things" in education, by examining some of the purposes for which instructional materials are used, by suggesting some general criteria for the selection of materials, by describing some ways of classifying materials, and by discussing briefly some elements that lead to good use. The other article is a combination opinionnaire and status study of instructional materials in elementary schools.

Instructional Materials in the School Program

By JOHN A. HOCKETT
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PRIMITIVE man makes use of but a few of the resources of his world, and generally but meager use of those few materials. As he learns to use more of the material things in his environment and to process these in newer and more elaborate ways to meet his needs for food, clothing, shelter, utensils, tools, weapons, and the like, his culture advances. Life becomes richer, more secure, and more satisfying. We denote the great periods in man's progress toward civilization by his characteristic uses of material things. Witness the age of stone, of copper, of iron, of steam, of electricity, and of atomic energy. We note the serious cultural limitations of peoples who must get along without the controlled use of fire, the convenience of the wheel, and the harnessing of other nonhuman sources of energy. The natural environment is not merely the stage on which the human drama is played; it is literally the stuff out of which man creates civilization, the arts, and the sciences in all their ramifications.

If "things" are so important to man and civilization, surely they must play a significant role in education. In simple societies, this significance is evident, for the chief education of the young is learning the arts and crafts practiced by their elders. In the modern world the role of things in education is much more complex but no less important.

Things in Education

The young person in twentieth century America needs to learn much that was important to the primitive child about the characteristics, uses, and simple processing of everyday objects and materials. But the modern child's world consists of a range and variety of products and processes vastly greater and more complex

than in any previous society. It is true that the individual today deals with many things only as the consumer of finished products, but even here he must choose wisely, use appropriately, and conserve intelligently those products for which he spends his money. He does not need to know the detailed processes of making nylon or a television receiver, but he should understand the significance of man's increasing control over matter and energy and the problems that must be solved if this growing control is to result in a better life for all. The Mark-Hopkins-on-one-end-of-a-log type of education can result in nothing but a dangerous, abstract verbalism unless we presuppose in the learner a prior wealth of firsthand contacts with the world of living and inanimate things and with the world of people. In fact, we educate not directly, but by setting up a wholesome and challenging environment and by stimulating and guiding children to act within that environment in desirable ways.

Purposes of Materials in the Educational Program

One general aim of education is to help young people learn about and adjust to the world in which they live—the world of things, of people, of ideas, and of ideals. One basic purpose of education, then, is learning about inanimate objects and living creatures: their characteristics, qualities, and uses, and known ways of modifying or transforming them in the interest of greater usefulness. This purpose suggests the whole realm of nature study and science and industrial arts. But fine art, too, involves the proper selection and use of materials. Homemaking draws upon science, industrial art, and fine art. Music depends upon the vibrations of strings, reeds, strips of metal or wood, bells, and the like. Often considered an abstract subject, mathematics arose as man sought to enumerate, define, and classify the objects in his environment.

Children learn about peoples thru understanding their uses and modifications of materials, and how various cultures are based on the processing of sticks, stones, horns, shells, and bones. A child's understanding of an Indian group approaches reality as he struggles to use authentic Indian methods in fashioning a bowl, weaving a fabric, and grinding corn between stones. So, too, he enters sym-

pathetically into the life of the colonist as he cards wool, spins and weaves, and dips candles.

Children learn how to work together in the give and take of problem-solving, sharing, and assisting each other as they struggle to produce a desired result thru the use of varied materials. Such values may accrue whether the product is a kindergarten playhouse, a fourth-grade mural, or a sixth-grade science exhibit. Such important character values as persistance, self-reliance, and open-mindedness to the suggestions of others emerge as a child overcomes obstacles in producing a satisfactory product out of reluctant materials.

Young people acquire concepts and gain insight and information from a wide variety of materials. These include real objects and processes, pictures and other audio-visual aids, and reading materials. Materials contribute to the development of many skills. The mastery of reading, writing, spelling, arithmetic, singing, and other skills requires a variety of appropriate learning and practice materials. The skills involved in playing many games and in using simple tools can be developed only thru practice with appropriate materials.

The value of materials and the effective use and conservation of material goods can be learned only as young people have experience in using and conserving a great variety of such goods. If teachers will utilize the frequent opportunities to instil attitudes and habits of conservation, they can do much to counteract wasteful practices which are so easily acquired in our society of relative abundance.

Criteria for the Selection of Equipment and Supplies

A later section of the yearbook will deal specifically with criteria for selecting materials. Only some general considerations will be presented here. First, each item of equipment and supplies provided in the school must be justified by its contribution to the educational purposes of the school. This criterion implies that without such an item one or more accepted school aims would not be so well, or so fully, or so efficiently, attained. The American Association of School Administrators rightly state in their Thirty-

First Yearbook that "without appropriate materials, a modern educational program is an impossibility."

Second, the equipment and supplies provided in a school should be in harmony with the philosophy of education held by the school staff. If the staff believes that children learn and develop as they are guided to set up worthy purposes for themselves, and are helped to plan and achieve those purposes thru extensive individual and group efforts of many kinds, a great variety of materials and the type of equipment that lends itself to flexibility in use will be needed. If the principal and classroom teachers hold that the best kind of learning involves the two-way process of firsthand contact with reality and firsthand expression thru use of things as well as words, the environment for doing and learning must be rich in things and possibilities. On the other hand, if the staff conceives education to be a pouring-in process, largely verbal in character. fixed seats and a few books will suffice.

Third, equipment and supplies should be appropriate to the maturity and educational level of the pupils who will use them. This statement seems obvious if not trite. But to satisfy such a criterion is far from simple when every child in a group is at a different level of achievement and development. We know that many fifth-graders cannot read fifth-grade books, and others in the same class need more difficult materials as a challenge, yet classrooms may still be found where every pupil has the same book labeled "Fifth Reader."

Fourth, both supplies and equipment should be designed and used in accord with the best that is known about how children develop and how learning takes place. To state this criterion is to raise many questions. Is learning more thoro and lasting when children have many vivid, firsthand experiences? To what extent do such experiences reduce the amount of drill necessary to "fix" useful facts and skills? Is it important that children meet and solve various types of problems as they work extensively with a great variety of materials? To elaborate the implications of this criterion would require a large book.

Fifth, equipment and supplies should be well constructed of appropriate materials, designed for repeated, safe use and for efficient storage and maintenance. Printed and pictorial materials

should be accurate, authentic, and up to date. To meet this criterion requires the cooperative effort of those who produce school equipment and supplies and those who use them. Such cooperation exists at present, of course, but the effectiveness of the joint efforts might be increased if attention could be directed to critical evaluation in actual use of all materials before they are produced on a large scale. Cooperation of teachers and producers in the planning of new materials is increasing and gives promise of still further improvements in the future.

Sixth, policies governing the selection and purchase of equipment and supplies should be formulated by the board of education, based upon the recommendations of teachers and administrators. Approved lists of equipment and supplies are a time-saving convenience to everyone. However, if education is a vital living process, the experiences and activities in any one classroom will be somewhat different from those of every other room. Consequently, each teacher and class needs the opportunity to request and receive "unusual" materials, over and beyond those in the standardized list. Furthermore, the effort necessary and the red tape that must be overcome in securing these extraordinary supplies should not be so great as to discourage a busy, conscientious teacher from trying to secure them. Such teachers should be encouraged, by all means available, to keep their pupils' experiences vital and challenging.

Types of Educational Materials

An effective modern program of education requires many materials, as even a brief look at any purchasing agent's list will indicate. First, one may distinguish between those items which are used over a considerable period of time, such as classroom furniture, clocks, motion picture projectors, saws and hammers (equipment), and materials which are consumed or need replacement within a short period, such as pencils, drawing paper, test booklets, practice pads, and crayons (supplies).

Second, we may note that many items of both supplies and equipment are for the use of pupils, while others, such as course of study bulletins and teachers' manuals, are for the teacher. Still others are needed by the principal, the clerk, or the nurse. The library, auditorium, playground, and special rooms all have unique

needs for equipment and generally for supplies also. The custodian must have many materials if he is to perform his cleaning and maintenance responsibilities effectively. Handicapped children, such as the mentally retarded, the crippled, the brain-injured, the hard-of-hearing, and partially sighted need specialized equipment and supplies, in some cases quite different from those provided in the typical classroom.

Using another basis of classification, we find many materials produced and distributed on a nationwide basis, others limited to a particular state, and still others devised and distributed only within the county or the school district. In addition we find materials made or collected by the staff of a single school and by the individual teacher. The producers of materials used nationwide often spend large sums of money in research and development. For example, a comparison of recent textbooks with those of one or two decades ago shows the striking improvements brought about in recent years. It is seldom financially feasible to produce materials for a single school district or even a county. Since the curriculum in many cases could be enriched significantly if more materials oriented to the particular locale were available, the efforts of a number of school districts to produce books, visual aids, and other local materials are to be commended and encouraged. Some classroom teachers increase their effectiveness by building up their own picture files, sets of mimeographed stories or informative selections written at different levels of difficulty, films or slides which they may have "taken," collections of free or inexpensive booklets, and other personalized items, just as a carpenter or electrician supplies himself with tools for effective work. Principals may well encourage and help teachers equip themselves with useful items of these types.

Another distinction in thinking of materials is between those purchased by the district and those which may be secured free or at nominal cost by the teacher or the school. The latter category includes a great volume and variety of printed and visual materials produced by an industry, a business, or even a chamber of commerce, designed to present information about the conduct of the business and its service to the community. In some cases, but not by any means in all, the purpose of the material is to produce customers for a product or to present a point of view. Much of the material is excellent and meets a real educational need. The problem is to

select and use the material wisely, helping pupils to examine and compare many points of view, but indoctrinating them with none.

Effective Use of Materials

School materials are used to promote the achievement of educational objectives and should be selected and evaluated in terms of the extent to which they actually help pupils learn. The objective may be a specific one, such as learning to recognize certain printed words, or a generalized one such as learning to cooperate in building a playhouse. However, the achievement of almost all valid objectives requires use of materials. Teachers should see clearly the aims being sought in the use of any materials and recognize the most effective uses in relation to those aims, for then materials will not be used merely to entertain pupils or to provide busy work. Teachers are more likely to make effective use of a book, for example, if they have had a part in choosing that specific book from a group of competing books and if they know the principles of organization and objectives which the authors had in mind. Fortunately, teachers' manuals and guidebooks available for most textbooks are today very helpful in this respect. One would recommend similar procedures of teacher participation in the selection of educational films, filmstrips, and many other types of school materials.

If equipment and supplies are to be used most efficiently, they must be accessible when needed. This requires convenient storage both in the school's central storerooms and in the classroom, and simple procedures for removing and replacing the desired materials. In the classroom, children can help the teacher in the care and use of materials while simultaneously learning good habits of orderliness and conservation. Best use of materials often involves the development of interest and work centers in the classroom. The nature of these will vary from time to time, but may often include a book corner or table, a science shelf, an art center, a bulletin board, a construction corner, and an exhibit case.

Materials should be evaluated while they are being used, to insure both effective use and improved selection. The teacher should have certain questions in mind: How do the pupils react to the material? How do they use it? What information, concepts,

insights, understandings, skills, habits, attitudes, and ideals are they developing? Is the material too difficult, or too easy, for some or all the pupils? Would other materials or a modification of these materials be more effective? Would a different use of these materials be better? Could these materials be used more effectively at another time? What learnings in addition to those primarily sought may result from use of these materials?

Children need guidance in learning the proper uses of materials. With tools, such as saws and chisels, and with various items of science equipment this guidance will involve safety for self and others as well as competence in securing results. With practice materials in such skills as computation or spelling, faithfulness in following directions may need to be stressed. Several study skills must be mastered if one is to make efficient use of reference books, encyclopedias, and other library resources. Some teachers seem to let children learn to work with materials largely thru their own trial-and-error efforts. Others favor dictation and demonstration by the teacher and imitation and conformity by the pupil. Still others believe the teacher's role is to stimulate children to use their minds along with their hands in considering and devising for themselves best ways of employing material things to achieve their goals. This last method seems to offer much richer educational possibilities.

In these opening pages, we have tried to develop a setting for considering instructional materials in the school program. The discussion has been directed particularly toward purposes, criteria for selection, types, and good usage. These points will appear repeatedly in new contexts as you read and study the other articles in the book.

Improving Instruction thru an Adequate Materials Program

By the NEA RESEARCH DIVISION

Most aspects of school curriculums require some kind of instructional materials for their realization. Think of a few activities —reading, observing, listening, manipulating, telling, writing, sketching—all of them go forward with materials directly, or, at least, materials are used at some stage in the development of the activity. Because of this hand-in-glove relationship of materials and meaningful activities, elementary-school principals are alert to sustain the strong points of their programs and to make the weak points stronger as they strive to accomplish the goals of education.

In connection with this Yearbook, the Department and the Yearbook Committee wanted to get the opinions of principals on the adequacy of the instructional materials programs. Adequacy also implies an attempt to see roadblocks to improvement. Accordingly, the NEA Research Division, with the cooperation of the Committee, surveyed a sample of the membership on the general topic: Problems on the Effective Use of Instructional Materials.

Details of the Survey

In the questionnaire instructional materials were divided into five groups: (a) projected materials: films, filmstrips, and slides; (b) program materials: records, tapes, radio, and television; (c) textbooks and other books; (d) free or inexpensive printed materials; and (e) graphic materials, models, and displays. These groups may not represent the best division of instructional materials, but seemed sufficiently differentiated for the purposes of the survey.

For each of the above areas three types of comments and suggestions were requested: (a) the opinion of the principal on the school's program in the area, (b) possible impediments to fuller flowering of the program (checklist), and (c) lists and descriptions of conditions which encouraged the development of the program.

The Principal as Surveyed

In April 1955 the questionnaire was sent to about 2000 principals, approximately one-seventh of the membership of the Department. The mailing was proportionate to the membership in each state but was not at random on a stratified basis. Table 1 shows that replies were received from 502 principals, one-fourth of those receiving the inquiry.

TABLE 1.—NUMBER AND PERCENT OF SUPERVISING PRINCIPALS REPORTING, BY SIZE OF SCHOOL AND PERCENT WHO ARE FULL-TIME

Pupils enrolled	Reporting principals		Percent full-time supervising principals*
	Number	Percent	
1	2	3	4
Fewer than 250	45	9%	33%
250-499	193	38	77
500-749	156	31	98
750-999	69	14	99
1,000 and over	39	8	100
Total reporting	502	100%	84%
Median enrolment	520	...	...

* The percent of principals, in each enrolment grouping, who have no regular class to teach. For the total group, 80 (16 percent) of the 502 are teaching principals.

TABLE 2.—NUMBER AND PERCENT OF FULL-TIME TEACHERS IN SCHOOLS OF REPORTING PRINCIPALS

Teachers per school	Reporting principals	
	Number	Percent
1	2	3
Fewer than 10	71	14%
10-19	238	48
20-29	127	25
30-39	54	11
40 and over	12	2
Total reporting	502	100%
Median number of teachers	18	...

In terms of the median, Tables 1 and 2 together provide the following picture of the elementary-school principal: He has full time for his work in the principalship, he works with a staff of 18 full-time classroom teachers, and the school enrols 520 (a ratio of 29 pupils per teacher).

That the median provides a reasonable description of the principalship follows from an examination of how the data varied. For example, over two-thirds of the schools were in the two enrolment intervals from 250 to 750, and almost half of the schools by number of full-time teachers were in the 10 to 19 interval.

Most of the principalships (84 percent) were full-time supervising positions as distinguished from teaching principalships. In the schools enrolling fewer than 250 pupils, 33 percent were full-time supervising principals; in the next enrolment interval the percent of supervising principals jumped to 77.

The foregoing general description of the replies to the questionnaire leads us to believe that the opinions on the instructional materials programs obtained give a picture of conditions somewhat better than they are for all elementary schools. However, this observation does not detract from the usefulness of the statistics in the next few pages in pointing up some of the low and high spots in instructional materials programs.

Opinions on the Program

For each of the five general classifications of instructional materials, the principals were asked to check one of three possible reactions to the school's program in the area. The choices were: the program is excellent, fully adequate; the program is reasonably adequate; or the program needs considerable strengthening. Table 3 summarizes the responses.

The principals indicated, by a fairly large margin, that the textbook and other book portion of the instructional materials program was the strongest of the five aspects. Fifty-eight percent checked it as being adequate and 36 percent, fully adequate. Only 6 percent reported that their book program needed strengthening.

The films, filmstrips, and slides part of instructional materials programs was second highest in over-all strength in the opinion of

TABLE 3.—PRINCIPALS' OPINIONS OF THE INSTRUCTIONAL MATERIALS PROGRAM

Type of material	Number reporting	Opinions on programs		
		Fully adequate	Adequate	Needs strengthening
1	2	3	4	5
Textbooks, other books	499	36%	58%	6%
Films, filmstrips, slides	500	22	58	20
Free or inexpensive materials	501	13	58	29
Records, tapes, radio and television programs	493	9	46	45
Graphic materials, models, displays	490	8	41	51

the reporting principals. It was second from the top on the rating as fully adequate and second from the bottom on the rating as needing strengthening. Like the book item, 58 percent rated projected materials as adequate.

Of the five classifications of instructional materials, free or inexpensive materials were in a middle position when looking from the rating of fully adequate to the rating of needs strengthening.

The remaining two areas were relatively weak, in the opinion of the reporting principals. The position of the two areas is indicated clearly in column 5 of Table 3. Forty-five percent of the principals rated the program types of materials as needing strengthening, and 51 percent rated graphic materials as needing strengthening. These areas may be considered as needing strengthening in the sense that their usefulness to the school program has not been as fully realized as has that for some of the other areas. This need for strengthening is the important suggestion growing out of the data.

Impediments and Encouraging Signs

On the checklist of possible impediments to the development of instructional materials programs, the principals were instructed to check all items applicable and to add others that were not represented. On the question pertaining to encouraging conditions, a space was provided for naming and briefly describing one of them.

TABLE 4.—IMPEDIMENTS TO GROWTH AND ENCOURAGING SIGNS IN THE AREA OF RECORDS, TAPES, AND RADIO AND TELEVISION PROGRAMS

Impediments		Encouraging signs	
Type	Frequency of mention	Type	Frequency of mention
1	2	3	4
School lacks necessary equipment	55%	Continuing progress toward a better program	24%
School lacks adequate budget	48	Educationally worthwhile programs available	10
Classroom teachers do not know how to make effective use of such aids	36	No impediments	9
Educationally worthwhile programs not available	35	Teachers interested and taking advantage of materials	7
Classroom teachers are not offered inservice courses	21	Cooperation of parent-teacher association groups	7
Classroom teachers are not given opportunity to select materials	6	Capable leadership	4
Others	8	More money available	4
Total number reporting	502	Courses of instruction available	4
		Others	11
		Total number reporting	502

The results from these two questions make up the subjectmatter of Table 4. Since the two items were developed independently, they are not direct offsets to each other but, in general, they are still opposites.

Because the replies to the two questions were reasonably similar for each of the five classifications of instructional materials, excepting the fact that the lack of an adequate budget did not apply to free materials, Table 4 shows the details for only one of the classifications: records, tapes, and radio and television programs. The item, lack of equipment, was checked as an impediment to this program by 55 percent of the 502 reporting principals, an inadequate budget by 48 percent, ineffective use by classroom teachers by 36 percent, educationally worthwhile programs not available by 35 percent.

Three types of impediments summarize many of the difficulties in the different areas of instructional materials. They are (a) the

need for making the best use of available funds for equipment, (b) the need for more adequate financial support, and (c) the need for surrounding personnel with an environment that makes them want to move forward in this area.

Among the "encouraging signs," of Table 4 was the 9 percent of the principals who reported no obstacles. Twenty-four percent of the principals stated, in one way or another, that they and their staffs were making progress toward a better program. A few more specific signs of encouragement as reported were: more educationally worthwhile programs are becoming available, by 10 percent; teachers are interested and are taking advantage of materials, by 7 percent; parent-teacher association groups are cooperating, by 7 percent.

While the impediments may loom large, the total impression from the replies is that elementary-school principals are optimistic over prospects for continuing progress on instructional materials programs.

Role of the Principal

The last question of the survey was directed toward the whole instructional materials program. Principals were asked to name one or more things that they could do to improve instruction thru the better use of materials. Their comments can be grouped under several specific headings.

Leadership—Comments of 39 percent of the 502 reporting principals centered on the leadership function. They said that principals could provide leadership and guidance in securing more effective use of materials and in selecting them.

Inspiration—The comments of 19 percent could be classed as calling upon the principal to be an inspiration to his staff. They said that principals could be enthusiastic about instructional materials and could encourage the use of materials by pointing out the values in them.

Facilities—Making materials available was named by 15 percent of the reporting principals. They said the principal could provide resource materials and facilities for storing them.

Others—A variety of additional items were named by principals. They suggested: using teacher committees to share methods and

ideas, in helping to prepare the budget, and in helping to select materials; being well informed concerning available materials; allowing the principal more time for this work; evaluating materials; explaining the needs to the proper authority so that funds may be made available; working out a good scheduling and distributing system; allowing more time for planning for the use of materials. All these suggestions point toward the willingness of elementary-school principals to work for a solution to their problems.

Taking Stock

This survey has summarized the opinions of 502 elementary-school principals, members of the Department, on the adequacy of their instructional materials programs and the major obstacles to the type of program that their school staffs would like to see. Should the results make us satisfied that we have reached an adequate level? Hardly. Should they shower us with pessimism? Hardly.

Certainly the strong points of the programs need to be and will be sustained in their strength. From some areas that are not so strong, several questions arise: Have the creative possibilities of graphic types of materials been fairly realized? Are tapes and television too new for enough experience that would lead regularly to good usage?

The problems revolve about the familiar topics: equipment, budget, personnel. These are so interrelated that progress in one affects the others. Perhaps the way to proceed in individual schools is to set apart aspects that can be worked on and then to work on them, but all the while to keep in mind the whole instructional materials program.

This suggestion is not new to the elementary-school principal. He has been and continues to stand ready to take next steps. Obviously, he cannot make rapid progress without the sympathetic support of his superintendent, expressed largely thru the school budget. The instructional materials item in the budget is a legitimate cost; it cannot be met by teacher-made materials, gifts from parent-teacher associations, or any other improvisation, however worthy and useful these may be. To win this budget support, however, both classroom teachers and principals must demonstrate their need for instructional materials and show evidence of the effective use of such materials.

CHAPTER
TWO

Selecting Textbooks and Reference Books

It is the view of the Yearbook Committee that textbooks, reference books, and other types of books are an important part of instructional materials. When used properly, books are almost unlimited resources for teaching and learning. Such a view does not detract from the function of the newer types of materials. Perhaps the view fosters a balanced perspective of instructional materials.

The articles in this chapter are primarily concerned with the selection of books and are only briefly concerned with how to use them. It is assumed that, in general, readers can agree that sometimes the textbook is a framework that serves as a point of departure and at other times the textbook is something to come to for help. In this setting, the job of the classroom teacher is to bring the textbook into play within the area of pupil experience and to extend that experience.

As one of the articles points out, publishers consider themselves full-time partners with educators in the educational process. Both partners are represented by articles in the chapter. Two articles were written by persons connected with the publishing business, and three articles by persons in school positions. All of the articles were developed independently, but you will soon detect that all are striving for the same general goal.

Textbook Publishers Look at Selection

By RICHARD M. PEARSON
and WILLIAM E. SPAULDING[1]

A TRADE journal of book publishing, *Publishers' Weekly*, reported in August 1955 on the low estate to which "book learning" appeared to have fallen in an otherwise estimable New York State community.

> Passing the largest budget in its history, the _____ Board of Education voted 5-3 to recognize golf as an official sport at _____ High School and approved funds for hiring a coach and paying team expenses. To pay for this bit of bounty, the Board "hacked out" all items in the budget pertaining to books, the June issue of the *New York State Taxpaper* reports. Perhaps worried about Johnny's reading abilities or the lack thereof, one board member, according to the story, insisted that if anything should be put in the budget, it should be money for books. Education, he said, is more important than golf and the school system already has too many coaches. He was outvoted.[2]

Further investigation might reveal that the community in question provided adequate—if not ample—funds for textbooks, judged by current averages. In New York State in 1954, the average per-pupil sale of new schoolbooks was $3.38, compared with a nationwide range from $2.41 (Arkansas) to $5.21 (Arizona). But the real significance of this particular incident lies in its focus upon the question: How important a part does the textbook play in the process of education?

Naturally the publisher believes in the importance of his product. The successful textbook brings him not only an honest dollar's profit, but also a sense of belonging and contributing to the forward march of education in the United States. Publishers consider themselves full-time partners with educators in the educational

[1] The Yearbook Committee asked the American Textbook Publishers Institute to write an article discussing textbooks from the point of view of the industry. This article was prepared for the Institute by Richard M. Pearson, Vicepresident and General Manager of the Education Department of the Macmillan Company, and William E. Spaulding, Vicepresident and Textbook Editor of Houghton Mifflin Company.

[2] Publishers' Weekly. "News and Trends of the Week." *Publishers' Weekly* 168: 698; August 20, 1955.

process. To that end they seek out the most respected and most practical teachers and educators of teachers to be their textbook authors; former teachers, many of them with advanced degrees, to be their editors; and men with a variety of experience in and out of the educational world to represent them professionally "on the road."

Yet all these publishing people recognize that today's market (the school, with its expanding and ever changing program) determines the textbook product. The bookmakers have no ax to grind, no pet notions of their own to foist upon their customers. All that each one of them desires, in his endless race to outstrip his fellow publishers, who never let up their competitive pressure, is to give the school public what it wants and must have. The goals of "licking the competition" and "meeting the need" are as contemporary and as American as the system of free enterprise itself.

Changes in Textbook Selection

Many of us remember that it was not ever thus. Systems of textbook selection and purchase have changed greatly in the last 20 years. Altho it may not be generally understood, it is a fact that the 48 states have practiced at least 48 different methods of schoolbook buying over the years. Uniform adoption could and did place the same geography or arithmetic text in the hands of every single fifth-grader in one state while in the North and East an equally extreme local autonomy would supply wholly different sets of books to two elementary schools of the same small town. There is still no set pattern of textbook adoption, nor should there be.

Yet the changes that have slowly been taking place have been generally of two kinds: (a) There has been a growing tendency, even where control continues to rest with the state, to allow for the varying needs of local communities by substituting multiple textbook lists for the old system of uniform statewide adoption. (b) The classroom teacher, with his firsthand awareness of pupil needs and individual differences, has come to play a vital part in the process of textbook selection. In place of arbitrary choice by a school administrator, the present trend is toward selection by teacher committees (preferably with the understanding guidance

of the principal or the supervisor) in terms of the day-to-day problems which only teachers can solve in their classrooms.

The publisher, it should be stated emphatically, welcomes these changes. New publishing opportunities are constantly arising as new needs make themselves known. Salesmen become respected research workers as they scout out curriculum developments in their territories. There is a challenge to provide effective tools for every learning problem that develops in the fascinating, complex pattern of American education. Nor can it be doubted that the 75 or more publishers entered in the race will somehow come close to the goal they share with educators of having the right book available for each new teaching need that arises.

Obtaining the *Best* Book

Granting that "the aim's the same," whether you are buying or selling in the textbook market, how can the partners in the transaction best assure a successful outcome? The American Textbook Publishers Institute has some thoughts on the subject which are the product of long experience and considered reflection:

School authorities and publishers have a common purpose in studying the problem of textbook selection: to determine those procedures which best assure a fair and objective evaluation of every textbook under consideration. This means an understanding not only of what each book contributes to good teaching, but also of how well it meets the school's objectives for the grade and subject. Obviously such an understanding benefits both children and schools; it also works for better textbooks by making the publisher an active partner in the teaching profession. . . .

The details of any desirable procedure for textbook adoptions must vary with the subject, the grade level, and the peculiarities of each school system. Large cities will follow different procedures from towns and villages. Elementary school arithmetic poses problems quite different from high school science, adoptions from a state-approved multiple list require procedures different from those of independent school systems. Yet, underlying these many variations, there are several basic principles for the sound and successful selection of textbooks.

First and foremost, the selection should be largely influenced by classroom teachers. After all, they are the ones who meet the children each day and should be best able to judge the kinds of materials that are most effective. Guidance and counsel by supervisory authority is frequently necessary to make certain that selections meet the objectives of the contemplated pro-

gram; but teachers will be responsible for the use of new materials in the classroom and they should have a strong voice in the decision. A committee on elementary textbooks might well consist of four to six teachers, along with an administrative or supervisory official. On the other hand, textbook selection for a small independent high school might be informally assigned to the two or three who teach the subject. But whether the committee is large or small, formal or informal, elementary or high school, classroom teachers should have the primary responsibility for making textbook decisions.

No committee is stronger than its members. The wise superintendent will, therefore, evaluate candidates not only for their experience and proved teaching competence, but also for their individual judgment and resourcefulness. They should be able to recognize imaginative teaching when they see it in well presented and well organized materials; above all, they should be teachers who appreciate what good textbooks, properly used, can contribute to the learning process.[3]

Twelve specific points constitute a platform for effective textbook selection, as the publisher sees it:

1. The committee should not be secret.
2. The committee should be small.
3. The committee's task should be kept within reasonable bounds.
4. The committee should be given adequate free time.
5. A time schedule should be part of every procedure.
6. Publishers should be notified of pending adoptions.
7. Provision should be made for interviews.
8. Hearings may be desirable.
9. Outside consultation should be prudent.
10. Committees should be encouraged to study all aspects of the publisher's program.
11. Development of a course of study and the selection of textbooks should go hand in hand.
12. Individual judgment should be emphasized.[4]

Subjective Elements Enter In

No one, whether publisher or teacher, can quarrel with the single aim of all this: the obtaining of the *best* book, regardless of the machinery employed. But it quickly becomes apparent that any acceptable definition of "best" is not as simple as it might be. Perhaps, after all, the heart of the matter may lie in subjective

[3] American Textbook Publishers Institute, Sales and Distribution Committee. *Desirable Procedures for Selecting Textbooks*. New York: the Institute. p. 1-2.
[4] *Ibid.*, p. 2-12.

elements: How is the selected textbook going to be used? With what other materials? In what relation to the work of the teacher? How is the pupil's background of experience taken into account? What does he already know? How will he react to what the author is trying to tell him? Will he be interested? Will he learn things that he needs to learn? Only a group of teachers, meeting in committee and earnestly striving to locate the most efficient tools for the work they have to do, can find the answers to these questions. It could be that the backgrounds of the teachers themselves will turn out to be the deciding factor. If they are old hands at the game, a wide distribution of varied materials may serve their purpose best. If the majority of them are beginners, they may repose their confidence in that one of the many full-blown basal programs which, besides producing good results elsewhere, seems best calculated to serve as the greatest common denominator for the needs and temperaments and abilities of their own particular boys and girls.

From the Teaching Standpoint

In June 1949, the New York State Education Department published a "Letter to Supervisors" that is pertinent to this discussion. It said in part:

> Essentially, the problem is this. Look first for the book or books whose teaching aims are in harmony with your own. You should certainly be able to support with enthusiasm and confidence the results which the author of your textbook is trying to achieve. There is nothing more demoralizing to children than to have their teacher constantly fighting the textbook she is using. So spend a good bit of time looking for books which are trying to get the educational results, to develop the skills, the understandings and the appreciations which you believe should be the outcomes of the teaching you are doing.
>
> But don't be afraid to do some compromising. Better have a book that really does well the job it claims to do, even if it doesn't utterly fit your program, than one which promises to go right down the line for you and actually succeeds in accomplishing little of what it sets out to do. . . .
>
> How good is the author's teaching program? Are the things he expects the children to do from day to day practical? Are his directions clear and concise? Will they work with *your* children, with the age level you have in mind? You can judge of such things only by using the book for at least a section or two as the author expects the pupil to use it. You must imagine that you are one

of the children in your own class. Again, how practical does the author make your job as a teacher? Will the class activities suggested or implicit in his program work? How good is his sense of time and timing? Such things you can judge only as a teacher. But most important of all, is the author's program in each one of its details getting where you want to go? Is each item, each step, each page, section or unit really *driving toward the accomplishments of the purpose that you and the author have set for yourselves?*

As you read the textbook, remember that what you are reading is the author's instructional talking to the children in your class. How well has he guessed their background of experience as he goes along? Is he using language—both vocabulary and manner of putting things—which your children would readily understand if you were to say the same things to them in the same way? Has he made good guesses about their reactions to what he is saying?

How good a job has he done in "personalizing" the program, that is, in making each member of your class feel that what he is saying is important for him, that it really makes a difference? What about the use of visual aids —pictures, cartoons, diagrams, maps, pictorial graphs, charts? Do they really teach? Are they and the text doing the job together as you would do it if you were talking to your class and had pictures to make clear certain of the ideas that you wanted to give them—or are these graphic materials just "added on" to impress you?

Does the author recognize the fact that in good teaching you can do only so much talking before you give pupils a breathing space—a chance to check up on themselves? Does he recognize the importance of frequent class discussions in which boys and girls exchange ideas, clear up misunderstandings and get the many other advantages of group study and learning? And what about his proposals for activities that will take the class outside the textbook —his suggestions for other reading, for projects, research, experiments, excursions, reports, dramatizations, cooperative planning, what not? Are they really practical for you and for your pupils? If they are practical, *do they promote the ends that you are trying to achieve?* [*]

Publishers have no exaggerated notion of the part they play on the educational stage. They would emphasize, however, that the functions of the book and of the teacher are complementary, that the one, properly selected, can make the other's life simpler and more fruitful, and that the process of textbook adoption should be pointed toward that desirable outcome. Surely this emphasis would be worthwhile for all schools.

[*] New York State Education Department, Division of Elementary Education, Bureau of Instructional Supervision. "I Take as My Text." *Letter to Supervisors.* Letter No. 10, 1948-49 Series; June 1949. p. 2-3.

Gratuitous Observations

From where the publisher sits, he would tender some gratuitous observations—in good conscience and good intent—to his colleagues on the other side of the educational fence.

Textbook selection should not be attempted without a clear understanding of the separate roles played by the teacher and by the book. The latter should not be expected to do things it was never intended to do. In these times, however, its usefulness to the beginning teacher can be especially important.

Selecting groups nowadays seem inclined to give increasing weight to the accessories which accompany it and to the consultative services which its publisher supplies. A teacher's manual and the services of a reading consultant cost money, of course. If a publisher is to remain solvent, he must necessarily recapture any new or increasing costs of this kind by raising the price of the basal text itself.

The textbook salesman can be useful in the selecting process. He knows schools and school problems. Like any other good salesman, he aims to serve his customer, offering such helpful suggestions as he may have gleaned from a wide variety of teaching and learning situations.

More or less on demand, publishers are giving increasing attention to beautifying their product and simplifying its content. But it may be that attention needs to be refocused on the subject-matter itself. As textbooks become larger, handsomer, and simpler (and at the same time more costly), to what extent is education the gainer? The load of the teacher is undoubtedly lightened, but is learning itself in danger of becoming diluted?

Copyright dates seem to be emphasized more and more by selecting bodies. This creates a serious dilemma: A new copyright may on the one hand be the best possible guarantee that a book is up to date; on the other hand it may chiefly represent, as a matter of necessity, an attempt to meet the demands of textbook committees. If committees tend increasingly to bar from consideration texts that have not been revised within two or three years, the publisher has no recourse but to exercise his "revising" ingenuity within the honest limits of the copyright laws. He may wonder, however, how improvements may be effected almost perennially

in areas where time-tested methods have proved highly successful and subjectmatter changes ever so slowly.

The increasing weight of the textbook, following the traditional tendency to make it encyclopedic, appears to be in response to the continuing demand. Is there any likelihood that this trend will be reversed? If so, who is to point the way?

The fusion of subjectmatter in the elementary grades is creating new problems for publishers and for textbook committees. While the choice between fusion content and separate subjects hangs in the balance, the selection of textbooks may and often does become a vital factor in determining the course of study.

Publishers and school people are defending a common cause, working toward goals sometimes dimly seen but always consciously felt to be essential to the well-being of the American people. That crusading kinship is stronger than it ever has been before. It suggests that joint studies may be undertaken in not too distant a time, involving the respective "trade associations" of educators and textbook publishers, and that such studies may well lead the way to clearly discernible gains for both the teachers and the learners in our schools.

The selection of library books is more than a matter of filling out an order blank. It is aimed at making the right book available to the child at the time he needs it. Thus, the selector of books must know principles of book selection, titles, and sources. In a school system fortunate enough to have librarians, much of this work is left to them. In less fortunate systems, or those which are more isolated, it is usually the classroom teacher who selects the books for purchase.

—McALLISTER, DAVID. "Aids to Book Selection." *Reading for Today's Children.* Thirty-Fourth Yearbook. Washington, D. C.: Department of Elementary School Principals, National Education Association, 1955. Chapter 6, p. 145.

Operation of a Textbook Selection Program

By GUY McNIEL
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SELECTING textbooks is a process, not an end, and it should be approached as means toward ends. Therefore, it is necessary to set up objectives or to review the general purposes of subjectmatter areas for which selections are being made.

The size of the school system will affect to some degree the leadership roles assumed by the elementary-school principal. Some of the differences due to size need to be recognized so that textbook selection may be a professional growth experience for all classroom teachers, the supervisors, and the administrators who participate, and that participation will be as wide as possible.

The Operation of a Textbook Selection Program

To clarify administrative functions and to illustrate the working procedures of a central committee, this article gives an overview of a plan that was used in a school system of approximately 275 teachers and 7000 pupils. The program is described in this order: (a) policy and criteria for setting up the committee, (b) working procedures adopted by the committee, and (c) a critical analysis of the method of selecting textbooks.

Setting Criteria for Committee Personnel

After the topic of textbook adoptions had been discussed in the administrative council which was composed of the superintendent, the coordinator of instruction, principals, and supervisors, a central committee of 15 members was set up. The coordinator was responsible for appointing teachers to serve on the central committee, but he consulted the superintendent and the principals before he made the selections.

A system of staggered terms was used in organizing the general committee so that about 20 percent of the staff were holdovers. This provided a nucleus of members who had experience in selecting textbooks. The following factors were considered basic in the selection of classroom teachers to serve on the committee: (a) professional competence, (b) participation in special service activities, (c) experience in selecting textbooks in previous years, and (d) the number of schools having teachers on the committee. Also, it was felt that a classroom teacher should have taught one year in the system before serving on the evaluative committee, and that he should have had experience in teaching in the area or subject in which adoptions were being made.

Working Procedures for the Committee

At the orientation session the coordinator proposed a plan for the number of meetings to be held and the major topics for each meeting. Also, he discussed the need for a basic set of principles to guide the actions of the committee. He then asked the members to study the problem of guiding principles and be ready to discuss and adopt a tentative list at the second general session, three or four weeks later.

In November, shortly after the State Board of Education had approved the selections made by the State Textbook Committee, the coordinator requested sample copies of books from the representatives of publishers who had titles on the multiple list, thus providing more time for teachers to study and to evaluate the sample books. Without this special request the local committee would not have had sample copies for study until about the middle of January when the state sends out sample copies. The time for selection is crucial because in Texas local adoptions must be made during the early part of March. This regular schedule would have left only about six weeks for study and adoption by local committees.

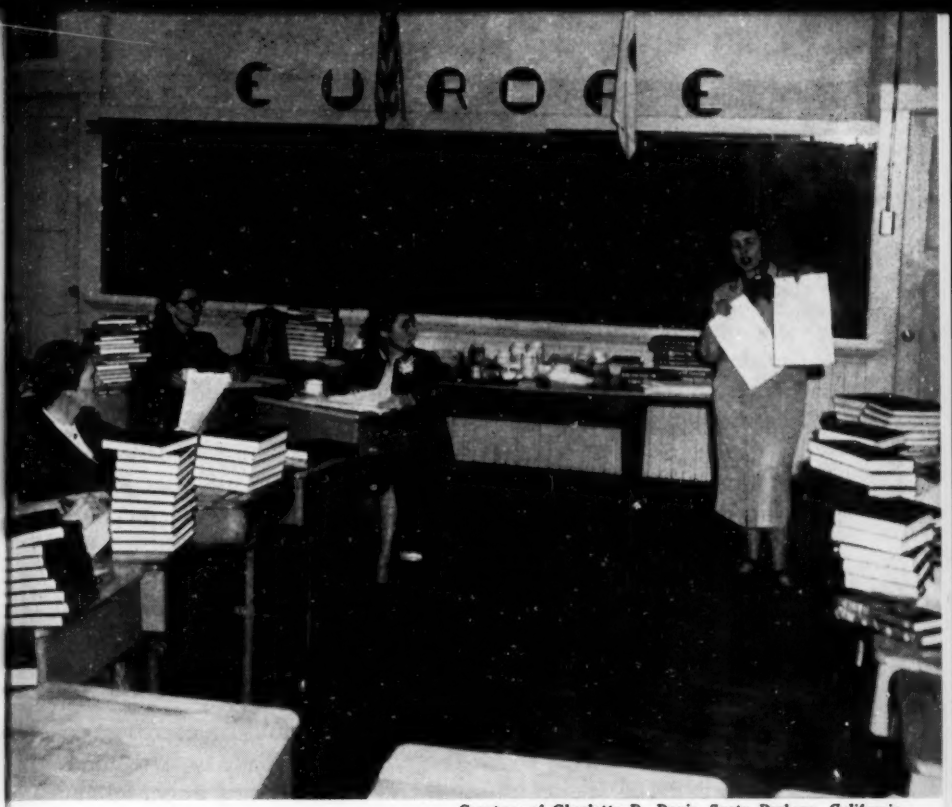
Usually 10 to 15 more teachers were brought in on the program as advisors to subcommittees so as to include more people in making decisions and in assisting committees that were considering several subjects or grade levels.

Responsibilities of the principal—The principal contributed in several areas. In addition to advising the coordinator about committee membership, he assumed responsibility for developing an understanding among members of his faculty of the program in the local school. Each principal worked with his building representative or committee member in getting sample materials before the faculty and conducted one staff meeting for analyzing the report of the selections made by the committee. Two or three principals served as advisors to the central committee.

Opportunity for teacher participation—Opportunity for teacher participation was also provided for those who were not listed as committee members or advisors. One set of sample books was kept on display in the administration building book room where teachers could come in, check the books out for three or four days, and return them. To facilitate this program, notices stating the hours during which the book room would be open for teachers were placed on the bulletin boards in all the schools. This means was used to leave the way open for any staff member to contribute to the program for choosing textbooks. Also, textbook selection was mentioned briefly at all faculty meetings held during February, and teachers serving as committee members commented on the progress of the work and invited other teachers to participate. The purpose of inviting comments was to develop understanding of the program as well as to increase the number of teachers who actually had a part in textbook adoption.

Every teacher, whether or not he was on the committee, was given an opportunity to rate the book or books that he had examined. These ratings were tabulated by the subcommittees prior to the final meeting of the central committee.

Selection by balloting—Some books were eliminated by the rating process, and at the last meeting the central committee selections were made by a ballot on which textbook titles and publishers could be ranked in order of excellence. Once the ballots were completed, the committee considered the number of various rankings given to each book. At this time committee members explained why they ranked books in a certain order. Out of this free exchange of information the committee eventually agreed upon a list of books to be recommended for adoption.



Courtesy of Charlotte D. Davis, Santa Barbara, California

Staff members are applying the principles of book selection.

Communicating decisions—Shortly after the committee had made its decision, a bulletin was prepared and distributed thruout the system. This bulletin listed the books selected and stated the basic principles that had guided the committee. In some years, the bulletin included an outline of the over-all program which covered three or four years so that teachers and administrators would have a broader perspective for seeing beyond the immediate problem. This record has value because textbooks are adopted for periods of five or six years, and sometimes they are not all allocated the first year; it may take two or three years for a school to receive its full quota based on enrolment. This record also serves to keep curriculum bulletins and supplementary materials that are produced or provided by the local district coordinate with the textbook program of the state.

Critical Analysis of the Program

An appraisal of our program showed the strengths of the plan: (a) an opportunity was provided for many teachers to participate in the selection of textbooks, (b) orientation of committee members included a discussion of textbook adoption at the state level and its relation to the local situation, (c) major decisions were made by the committee, (d) textbook representatives were used as resource people, and (e) selections were made in accordance with established purposes.

On the negative side, the communication system was inadequate at times, and school principals did not exercise sufficient leadership in the early stages of planning and setting up the program. Perhaps the difficulty was lack of sufficient opportunity for the principal to assume the initiative. On the other hand, some principals did not make full use of such opportunity as existed. A third weakness which is detrimental to effective group work was lack of adequate assistance and counseling for individuals to whom administrative responsibility was delegated.

Some of the difficulties we experienced would be overcome in a small school system where the principal is likely to have more responsibility in setting up committees and working as consultant with subgroups. In this situation he does not need to coordinate his staff planning with a central committee, and decisions that are made within the faculty determine policy and the materials selected. Also, the principal has direct responsibility for reporting to the state agency as well as interpreting policy of the state board to all members of the faculty.

Making Decisions Democratically

The extent to which various members of the faculty actually participate in the selection of textbooks is determined largely by the elementary-school principal. The type of leadership that he exhibits and the spirit with which he goes about this work set the stage for action. No other administrative officer has such an opportunity. Perhaps the attitude of the participants and the atmosphere in which selection takes place are as important as the regulations that govern or guide the process.

Score Sheet for Selecting Textbooks

By HARRY E. HOUTZ[1]
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In Pennsylvania the responsibility for selecting textbooks rests with the local board of education. This authority is exercised by the board on the advice of the superintendent or supervising principal who, in turn, should consult with elementary-school principals, supervisors, and classroom teachers.

Within this framework of authority there was developed a successful procedure. The principal appointed a core committee of classroom teachers from various grade levels and subject areas. An effort was made to appoint teachers, not only for their experience and proved teaching competence, but also for their individual good judgment and resourcefulness. The selectors were able to recognize imaginative teaching when they saw it in well-presented and well-organized materials. Above all, they were teachers who would appreciate what good textbooks, properly used, could contribute to the learning process.

The principal and the committee made the initial screening of textbooks in the subject area where the change was needed. This screening narrowed the field to four textbooks. At this point every teacher of that particular subject was given a copy of each of the books for examination. Several weeks were allowed for completing this part of the work. Then the core committee and the principal requested each teacher to appraise the books according to a carefully prepared score sheet.[2] The majority opinion of the teachers as shown by the scores provided the committee with information for their final decision. The principal informed the supervising principal of the school district, and he, in turn, made the proper recommendation to the board of school directors for final action.

[1] The author is also an instructor in the Graduate School of Education, Duquesne University, Pittsburgh, Pennsylvania.

[2] The score form was prepared by a curriculum committee of classroom teachers under the supervision of the principal.

Score Sheet for Selecting Arithmetic Textbooks

In the selection of textbooks the score sheet is probably the most common device used for making an objective analysis and appraisal. Such a sheet affords a systematic means of evaluating different elements. The following score sheet was used successfully in the selection of arithmetic textbooks for Grades III thru VI:

Title of book _____ Grade level _____

Published by _____

Date of publication _____ Edition _____

Authors _____

	High to Low			
	1	2	3	4
A. Authorship and Point of View				
1. How acceptable is the underlying philosophy of the series?	___	___	___	___
2. Is underlying philosophy of the author clearly and consistently demonstrated in the presentation and use of the content?	___	___	___	___
3. Has the material in the series been tried out in a variety of classroom situations?	___	___	___	___
B. Content				
1. Are grade placement and sequence approximately the same as recommended in the course of study?	___	___	___	___
2. Is the amount of new work equalized for the two semesters?	___	___	___	___
3. Is there proper balance in the distribution of the different types of material?	___	___	___	___
a. Development of meanings and understandings	___	___	___	___
b. Problems	___	___	___	___
c. Development of processes	___	___	___	___
d. Drill and practice material	___	___	___	___
e. Tests of computational skills and understandings.	___	___	___	___

(Score sheet continued)

	High to Low			
	1	2	3	4
C. Vocabulary and Sentence Structure (Are vocabulary and sentence structure suited to children's ability at this grade level?	___	___	___	___
D. Meanings and Understandings				
1. Is the development of meanings and understandings of the number system emphasized?	___	___	___	___
2. Are the fundamental processes and their functions adequately developed?	___	___	___	___
3. Are number relationships made clear?	___	___	___	___
4. Is social usefulness developed?	___	___	___	___
E. Presentation of New Material				
1. Is readiness developed?	___	___	___	___
2. Is the need for information developed in the presentation?	___	___	___	___
3. Is the presentation clear and understandable?	___	___	___	___
4. Is it in graded steps of difficulty?	___	___	___	___
5. In general does it proceed from concrete to semiconcrete to abstract?	___	___	___	___
F. Practice and Drill Material				
1. Is sufficient practice provided for initial mastery?	___	___	___	___
2. Is drill distributed to insure maintenance of skills?	___	___	___	___
3. Is there sufficient variety to insure interest?	___	___	___	___
4. Do drill exercises use numbers which might reasonably be used in real life situations?	___	___	___	___
5. Is the motivation satisfactory?	___	___	___	___
G. Provision for Individual Differences				
1. Is supplementary enrichment material provided for rapid learners?	___	___	___	___
2. Are diagnostic tests provided for discovery of specific weaknesses?	___	___	___	___
3. Is keyed remedial instruction provided in connection with each diagnostic test?	___	___	___	___
4. Are remedial exercises designed for self-administration by the pupils?	___	___	___	___
H. Measuring Achievement (Are tests provided to show achievement?)				

(Score sheet continued)

	High to Low			
	1	2	3	4
1. In new work?	___	___	___	___
2. In larger units of work?	___	___	___	___
3. In term's or year's work?	___	___	___	___
I. Problems				
1. Are computational skills and problem-solving related?	___	___	___	___
2. Are the different types of problems distributed to maintain skill in each?	___	___	___	___
3. Do problems present real life situations meaningful to children?	___	___	___	___
4. Are problems organized so that several problems arise out of one large area?	___	___	___	___
5. Is there sufficient variety in the language used in:				
a. Describing the problem?	___	___	___	___
b. Stating the question?	___	___	___	___
J. Teaching Aids				
1. How satisfactory is the manual?	___	___	___	___
2. How satisfactory is the workbook if there is one?	___	___	___	___
3. How nearly complete is the index?	___	___	___	___
4. How valuable are the pictures, charts, and other visual aids?	___	___	___	___
5. Do the pictures make a direct contribution to learning?	___	___	___	___
K. Physical Features				
1. How durable is the binding?	___	___	___	___
2. How durable and acceptable is the quality of the paper?	___	___	___	___
3. Is face, size, and spacing of type satisfactory?	___	___	___	___
4. Are illustrations attractive and well placed?	___	___	___	___

Score Sheet for Selecting English Textbooks

What has been presented about the selection of arithmetic textbooks applies in general but not in detail to other texts. For example, the following score sheet was used in the selection of an English textbook series for the elementary school:

Title of book _____ Grade level _____

Published by _____

Date of publication _____ Edition _____

Authors _____

	High to Low			
	1	2	3	4
A. Authorship and Point of View				
1. How acceptable is the underlying philosophy of the series?	___	___	___	___
2. Is the underlying philosophy clearly and consistently demonstrated in the presentation and use of the contents?	___	___	___	___
3. Has the material been checked with classroom teachers?	___	___	___	___
B. Content				
1. Does the material arouse the interest of children?	___	___	___	___
2. Is there adequate emphasis on the fundamental English skills?	___	___	___	___
3. Are stories, poems, and children's literature appropriate and of high quality?	___	___	___	___
4. Is there proper balance between oral and written language?	___	___	___	___
5. Are the vocabulary and sentence structure well adapted to the grade level?	___	___	___	___
6. Does the material emphasize the development of social competence?	___	___	___	___
C. Presentation of New Material				
1. Is readiness developed for each new topic?	___	___	___	___
2. Are skills developed in natural settings and with purposeful practice?	___	___	___	___
3. Is the presentation clear and understandable?	___	___	___	___
4. Is the development of content easy to follow by pupils and teacher?	___	___	___	___
D. Practice and Drill Material				
1. Is practice preceded by careful development?	___	___	___	___

(Score sheet continued)

	High to Low			
	1	2	3	4
2. Is sufficient practice provided for initial mastery of new processes or understandings?	___	___	___	___
3. Is the drill distributed to insure maintenance of skills?	___	___	___	___
4. Is there sufficient variety to insure interest?	___	___	___	___
5. Do the practice exercises embrace real life experiences?	___	___	___	___
6. Does format provide strong motivation?	___	___	___	___
E. Provisions for Individual Differences				
1. Is supplementary enrichment material provided for rapid learners?	___	___	___	___
2. Are diagnostic tests provided to discover specific weaknesses?	___	___	___	___
3. Is remedial instructional material provided?	___	___	___	___
4. Can children check their own weaknesses?	___	___	___	___
5. Does the teaching method emphasize quality and motivation?	___	___	___	___
F. Teaching Aids				
1. Is there a helpful manual provided for the teacher?	___	___	___	___
2. Does the book have a well-organized index?	___	___	___	___
3. Is the material well illustrated?	___	___	___	___
4. Do the pictures, charts, and guides offer valuable aids?	___	___	___	___
5. Do the pictures make a direct contribution to learnings?	___	___	___	___
6. Is there a convenient plan for checking pupil achievement?	___	___	___	___
G. Physical Features				
1. Does the book have a durable binding?	___	___	___	___
2. How acceptable is the paper?	___	___	___	___
3. Is the type size adapted to grade level?	___	___	___	___
4. Is the type face satisfactory?	___	___	___	___
5. Are the pictures, charts, and guides attractive and well placed?	___	___	___	___
6. Are the books of convenient size for use on the desk?	___	___	___	___

Values from Selection

When a score form is prepared by a local faculty or a representative committee of the faculty, the form is more likely to reflect the objectives of the local school system than one prepared commercially or by a state committee. The locally developed score form also awakens the classroom teacher's desire to study the elements of a good book. Our experience shows that the study of various textbooks should help to mature a teacher and to make him more aware of different approaches, technics, and skills required to evaluate any textbook well.

The choice of a new textbook depends upon the purposes for which the book will be used. In some communities a new textbook is selected by administrators; in other communities choice is determined by city, county, or state adoption lists. When a new basal reading series was needed in Hasbrouck Heights, New Jersey, however, the teachers of Euclid School were given the privilege of selecting the best series for use in Euclid School. Teacher selection was so successful that I offer our experience to other principals as worthy of a trial.

Altho we use several books in each grade for the teaching of reading, and altho we do care for individual differences by using books of various grade levels in each grade, we believe that a basal reading series is essential. The young learner can be seriously handicapped by careless instruction in beginning reading. Stories must be interesting to attract the youngster and each child must be helped to establish a basic sight vocabulary and to learn to attack new words on his own thru the use of context clues, word-form clues, and phonetic and structural analysis.

—PATTERSON, CHARLOTTE E. "Choosing a Reading Series." *Reading for Today's Children.* Thirty-Fourth Yearbook. Washington, D. C.: Department of Elementary School Principals, National Education Association, 1955. Chapter 7, p. 164.

Developing and Applying Criteria

By CHARLOTTE D. DAVIS
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Santa Barbara, California

THE development and application of criteria are of primary importance in the selection of instructional materials. The total procedure stems from the book selection policies set forth by the board of education, and the selection of materials takes place within the framework of these policies.

Rooted in Principle

Broad concepts of the purposes for which books are provided in our schools represent the basic principles of selection. In effect, this is what these principles say about books and instructional materials:

1. They should be in harmony with a stated philosophy of education.
2. They should be in keeping with the specific desired learnings; that is, correlated with the curriculum.
3. They should be in accord with the latest research on efficient teaching methods and the ways in which the children grow and develop.
4. They should be factually accurate.
5. They should be continuously evaluated and re-evaluated, for scientific facts change, philosophies of education develop, better materials are produced.

Standards by which materials may be judged fairly are developed from the basic statement of principles.

Working Toward Specifics

Criteria for selection become more specific as evaluation begins. Guidelines for book selection, such as the following, become the basis for starting the work:

1. They should be essential to the development of the subject.
2. They should be factually accurate and objective in presentation.
3. They should make contributions to literary appreciation or have esthetic value.
4. They should be selected because of the content and appropriateness to the curriculum.
5. They should be written by authors competent and qualified in the field.
6. They should represent both sides of the issue objectively.

In other words, books will be evaluated carefully in the light of their scope of content and objectivity, their place in the curriculum, and the competency of the author to present the information contained in the book. Other criteria, refined to the specifics in each subject area, guide in judging appropriateness to the age and maturity of the pupil, the illustrations, and the format.

Who Develops Criteria?

Altho the state of California adopts a minimum number of textbooks for use in the elementary schools, the local district board or the county board of education is responsible for adopting supplementary materials.

In the Santa Barbara County Schools the whole process of selecting instructional materials is a cooperative procedure. Under the sponsorship of the County Superintendent of Schools, two materials committees have been formed—the Library Committee and the Audio-Visual Committee—whose functions are the selection of text and library books, films and other instructional materials appropriate for elementary-school use. The committees consist of teachers, administrators, consultants, and the coordinators of either library services or audio-visual services. Each district in the county is asked to appoint a representative to each of these committees. The committees meet periodically during the school year to develop criteria, evaluate instructional materials, and make recommendations to the county board of education for adoption.

How Are Criteria Developed?

Standards for judging textbooks, teachers' manuals, and films, for example, are developed cooperatively by the members of the Library Committee and the Audio-Visual Committee.

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The evaluation of books and films is a continuous process during the school year. In addition, one major evaluation is done each year in a special area such as dictionaries, encyclopedias, maps and globes, magazines for children, or classroom newspapers. A subcommittee is appointed to prepare criteria on the specific item under consideration. These statements are discussed and finally approved by the total committee. They then become the criteria upon which the evaluative work is based.

What Criteria Are Developed?

Criteria are developed for each specific kind of instructional material. For example, encyclopedias suitable for school use were evaluated last year. The first step was a careful analysis of each set on (a) an overview of the entire set, (b) content, and (c) physical aspects—format.

Then the evaluative criteria were developed by members of the Library Committee. The Committee kept in mind that the purpose was "to evaluate encyclopedias which are general in scope and suitable for use in the elementary school, with particular reference to content, vocabulary, suitability for basic instruction in fact finding and for pupil reference." The following criteria were established and applied to each encyclopedia under consideration:

1. Overview
   a. The encyclopedia should cover many subject fields of the school curriculum. Subjectmatter should be treated with regard for the interest level of elementary-school children.
   b. The encyclopedia should be planned for elementary-school children.
   c. Single volumes should be available for replacement.
   d. Materials should have been revised within the last two years.
   e. Contributors should be recognized authorities in their fields.
   f. The index, or the method of locating information, should be uncomplicated, direct, and easily used.
   g. The volume arrangement should be alphabetical. All topics beginning with the same letter should be in one volume.
2. Content
   a. Content of each article should be:
      (1) Specific
      (2) Clear
      (3) Accurate
      (4) Up to date as of date of publication.

b. Information should be presented in an unbiased manner.
c. Style should be suitable for children with respect to:
   (1) Vocabulary
   (2) Sentence structure
   (3) Paragraph length
   (4) Interest level.
d. If bibliographies are used, they should list references suitable for children.
e. Illustrations should be appropriate to the text.
f. Maps, charts, and graphs should be appropriate to the text, accurate, recent, and simple.

3. Physical aspects
   a. Format should include:
      (1) Adequate margins
      (2) Suitably sized and varied type for elementary-school children
      (3) Space between lines of type sufficient for legibility
      (4) Phonetic pronunciation
      (5) Arabic page numbering with each volume beginning with 1.
   b. Illustrations should be well proportioned to the page and clearly printed. Captions should be pertinent and easily identified with the picture.
   c. Maps should be as recent as content of article, clearly printed, with conventional markings.
   d. Charts and graphs should be recent, information clearly represented and easily read.
   e. Paper should be of dull finish and medium weight.
   f. Binding should be durable, easily cleaned, flexible, attractive, and volume should lie flat when open. Arrangement of information on spine should facilitate easy selection of desired volume.
   g. Individual volumes should be of a size and weight easily handled by children.

How Are Criteria Applied?

Criteria are applied to the selection of instructional materials thru group evaluation. To this end a series of encyclopedia evaluation meetings was planned by the Library Committee. The overall plan covered three phases of evaluative work.

In a general meeting, representatives from the various companies presented their encyclopedias at the opening session. Any company wishing to present an encyclopedia was welcome to do so. The various sets were left for committee use.

Four area meetings were scheduled in various parts of the county to encourage wide participation. Thus, many teachers in

each area joined with the regular members of the Library Committee to form an expanded committee for the purpose of evaluating encyclopedias for school use. At each area meeting the criteria were applied to each set and recommendations were made.

Then in a final meeting, the Library Committee considered the findings from each area meeting where the evaluative criteria had been applied; recommendations from each group meeting were discussed, and final recommendations were made to the county board of education. The result was a selected list of encyclopedias adopted by the county board of education.

Advantages of Cooperative Development of Criteria

Group participation in the whole process of the selection of instructional materials has resulted in outcomes beyond the provision of well-selected materials—the professional growth and development of all who participate. Classroom teachers have a great interest in materials which they themselves have had a part in selecting. They also have deeper understanding of the content and the use of materials. The development of criteria establishes a definite basis for making decisions. The exchange of points of view is stimulating to the participants and adds to the skill with which criteria are applied. Group selection provides assurance that careful consideration has been given to each recommended item.

Evidences of Effectiveness of Group-Developed Criteria

The effectiveness of placing the responsibility for selection of instructional materials in the hands of committees has been demonstrated in several ways. There has been a noticeable increase of interest in books, films, and other materials of instruction. Greater acceptance by all teachers of teacher-selected materials has resulted in an increased use of materials. The materials so chosen are broader in scope and well correlated with the curriculum. Publishers have come to realize that their materials will receive careful evaluation. Administrators and members of the county board of education recognize the value of teacher-evaluated materials by accepting committee recommendations.

Encyclopedias in the Elementary School

By EVERETTE EDGAR SENTMAN[1]

FORWARD looking educators have awarded reference books a unique place in the elementary-school program. Their growing importance is highlighted by the changes in purposes, approach, and content that have taken place in the books themselves.

Years ago, school encyclopedias were written chiefly for the classroom teacher. They contained much anthology material as well as articles on the teaching of school subjects. On the teacher's bookshelf, the encyclopedia often took the place of other instructional materials which were not available to him. The usual approach was to assume the presence of the teacher in any relationship between encyclopedia and child.

Today, school encyclopedias are written primarily for the school child. Generally, they place emphasis on the content subjects rather than on the skill subjects. In tune with curriculum planning, school encyclopedias treat a subject not as an isolated entity but as part of a spiral of interrelationships. Thru various study aids, the encyclopedia calls the young pupil's attention to these subject relationships.

Publishers are constantly seeking new ways of making it easy for the school child to find facts and meanings in the encyclopedia. They have largely overcome the language barrier which the specialists unwittingly erect around every major field of knowledge. As a result, scholars and specialists whose shop talk is rather deep are being coaxed into finding out what fun it is, and how hard it is, to write for children an article on automation for eighth-graders or one on American Indians for fourth-graders. Publishers of school encyclopedias strive to *make it simple* without making it simple-minded: no condescension or baby talk. Thus, these books provide a vital link between recorded scholarship and the inquiring

[1] For an article on encyclopedias, the Committee turned to the American Textbook Publishers Institute. As a result, here is a contribution from a man who has had years of experience editing encyclopedias. At present, Mr. Sentman is Editor-in-Chief, United Educators, Lake Bluff, Illinois.

young mind. And they are an expression of the new attitude toward education summarized by Barnaby C. Keeney, president of Brown University, when he said, "A scholar does not lose dignity by being intelligible."

How Reference Books Serve

The reference set offers a three-fold approach to learning in the elementary school: (a) it gives interrelated information in all major subject fields; (b) it builds research skills; (c) it enjoys its greatest success when it engenders in the individual the lifelong habit of exploring for knowledge—of seeking out facts and meanings for himself. This last point is important because a democratic society never ceases to depend on the ability of the individual to make informed and wise choices.

Centering Items of Information about One Topic

Recently I took a nature walk with a class of fourth-grade pupils and their teacher. No one was lugging encyclopedia volumes along, but the reference work was effectively if invisibly present. Two weeks before, the class had made a study plan based on questions the children had looked up in the encyclopedia: What kinds of trees might they find? What do these trees look like? Why do they grow here? What animals and animal homes may be found? How do these animals live? Where do ferns grow and why?

Some of the questions were teacher-inspired, but answers to them had all been looked up in the encyclopedia. The reference work had given the pupils a starting point. They took a little knowledge into the woods and made it grow. Many new questions popped up during the walk, and some of them could not be answered on the spot.

Back at school, the children eagerly sought the answers in the encyclopedia and made a magnificent paper sculpture and wrote stories about things they had seen in the woods. They drew upon the reference books for such information as the shapes and colors of birds, the living habits of ants, and the growth and uses of a shagbark hickory. The teacher told me later that this was not the end. Questions and discussion about the nature walk arose from

time to time for several weeks, and the reference volumes were used many times to provide the answers.

The encyclopedia in this as in many other learning situations was the easy-to-use source of the answers to What, Where, Who, When, How. Most important, it gave the answers to *Why*. Fact plus *Why* equals meaning. In this example the encyclopedia reinforced experience and made it more meaningful.

The encyclopedia also reinforces and implements instruction from the textbook. The imaginative teacher finds many kinds of resources in the school and in the community, and among these the textbook and the reference set stand paramount. They depend on each other. Students go from textbook to encyclopedia to broaden their knowledge of the subject and to discover interrelationships between subjects. They go from encyclopedia back to textbook to find where and how these newly discovered facts, meanings, and relationships fit into the learning pattern. Records and tapes, films, and other instructional aids also evoke questions which can best be answered by the encyclopedia.

Building Research Skills

All school encyclopedias are either alphabetically arranged or have an alphabetical index to a topical arrangement. Some of the alphabetically arranged encyclopedias also have an index to help the young reader find subtopics. Others follow a self-indexing plan by which alphabetical cross references to subtopics are appended to the articles. In all cases the alphabet leads to location.

Learning to find information is one of the most useful skills the elementary-school child can acquire. It makes other research easier, and it leads the child easily into familiarity with the library card catalog. The child who learns to use the encyclopedia at school and at home develops the library habit. From the encyclopedia the child eventually goes to such other works of reference as the atlas, the unabridged dictionary, the *Reader's Guide to Periodical Literature*, and more specialized information sources.

Engendering Zest for More

The encyclopedia can help in answering questions, in developing topics, and in solving problems. Undoubtedly its most frequent

use is in finding the answers to questions. Children's interest is fleeting, and the class should be satisfied when the question is "hot." This is one good reason for having an encyclopedia in every classroom. Another is the inconvenience of having to send someone to the school library to get the desired volume, only to find that perhaps the topic is discussed under another title in another volume. And many teachers know the sheer frustration of trying to plan a class project with the aid of parts of the library's encyclopedia, the other parts being in use elsewhere.

The encyclopedia can help the teacher who is trying to keep the exceptionally gifted child interested. It offers an almost unlimited source of special assignments. The various study aids found in every school encyclopedia make it easy to plan a program which will encourage the gifted child to explore many paths.

The Age Range of Encyclopedia Use

What about the use of the encyclopedia in the primary grades? Some of us have seen school encyclopedias being used by outstanding primary-grade teachers. And educational advisers are beginning to suggest that the reference-book habit cannot be acquired too early. Only a limited proportion of the content can be used, but that, very effectively. Many of the illustrations can be employed as teaching aids, particularly in second- and third-grade social studies. And even first-graders can ask questions that will stump the teacher unless he is in a position to say, "Let's look it up in our encyclopedia."

Last summer we observed a nursery-school class in which many kinds of children's books were being used. During one 15-minute period the children were given free choice of books to read, and almost invariably these four- and five-year-olds selected an encyclopedia volume. They chortled over the pictures: "I found a big sword!" "I found an alligator!" "I found a duck!" They liked finding pictures separated by all those columns of gray stuff as tho they could digest picture subjects better if they had some breathing space in between. No one would suggest that the encyclopedia has more than this limited usefulness at this level. But perhaps what Whitehead calls "the joy of discovery" cannot come too soon.

Fourth Grade and Up

With the teacher's help, organized use of the encyclopedia can begin in the fourth grade. After a few months some of the children should be able to find and read the articles they seek. They can begin to make simple reports on what they read. In the fifth grade and above, encyclopedia use becomes increasingly important. It can enrich the teaching of the language arts, the social studies, and science thruout the elementary-school curriculum. In mathematics the encyclopedia can be put to good use for review. By the seventh grade, pupils should be able to use the reference set skilfully and without much help from the teacher.

Grading Encyclopedias

Encyclopedia publishers are well aware that there is no such thing as grade level as a measure of a child's progress, except in a statistical sense. Individuals in a sixth-grade class may vary in reading ability from the first- to the ninth-grade level. Yet the publishers of school encyclopedias exert great effort to meet both content and comprehension requirements at the grade levels from four up. They base their list of subjects or entry titles chiefly on the subjects in the school curriculum. They then prepare text, illustrations, and study aids to meet curriculum requirements in the grade or grades in which the subject is studied. Articles and pictures "in the rough" sometimes are tested by putting them to use in the classroom. When all is said and done about reading formulas and theories, classroom testing in representative school systems gives some rather clear answers to what is useful and what is not.

Selecting Encyclopedias

Some factors are pretty constant in school encyclopedias. For example, in this highly competitive field you can depend on a high degree of accuracy among leading reference works. Most of the sets are attractive in format, designed to entice the child into their pages.

Here are some other criteria that may help you in selecting reference works for your school:

1. Does the encyclopedia have enough "muscle" to stand up under heavy use, hundreds of times more use than it would get in the home? Is it sturdily bound? Is the paper tough and of good quality?
2. Does its content meet your curriculum requirements?
3. Is the arrangement of subjectmatter well suited to your instruction program?
4. Is the encyclopedia well printed and easy to read?
5. Are the pictures graphic, informative, and sufficiently numerous?
6. Is the set kept up to date? Most school encyclopedias have a program of continuous revision. You can form a general idea of the extent and effectiveness of revision by looking up subjects, particularly in science, in which there have been fairly recent developments or discoveries.
7. Does the encyclopedia bear the imprint of a reputable publisher?
8. Does the work stress educationally significant concepts and subjects?
9. Do the children like the set?

Various agencies and publications review encyclopedias from time to time, and some of these published reviews may be useful to you in making a choice. A recent book[2] offers a wealth of general and specific informataion about reference works.

Our Young Critics

Children are more critical of reference books than adults are. They want them to be attractive outside and inside, with lots of pictures, maps, and diagrams; they like an article to be well organized, with graded progression from the simplest concepts to the more difficult ones; and they insist on accuracy of information. An adult research worker becomes accustomed to finding conflicting facts in source books and realizes that truth has many shadings. The child regards a statement as either *right* or *wrong*; and, if it seems wrong, the publisher is likely to receive an indignant letter signed "Sally Benson for the sixth-grade class." Children and teachers may not realize how important these letters are, but they may carry as much weight in the editorial office as a dictum from a committee of educators. This fact-hungry and hypercritical audience, the school population of America, has inspired publishers to make school encyclopedias more dependable, interesting, dramatic, and educationally sound than ever.

[2] Murphy, Robert W. *How and Where To Look It Up: A Guide to Standard Sources of Information.* New York: McGraw-Hill Book Co. (In press)

CHAPTER THREE

Instructional Materials in Language Arts and Social Studies

For this book, some of the areas of study are combined in a single chapter even tho they might logically command the space of a separate chapter or two. This chapter combines language arts and social studies. In its development, the Committee has tried to dip here and there without emphasizing unduly any particular aspect. The first two articles of the chapter consider the problem of teaching bilingual children.

Some of the lift that can be realized from such a field as children's literature is clearly expressed in the opening paragraph of the third article: "The art of communication is one of the most intangible and yet most important phases of learning. Communication means listening—trying to understand what another person is saying, enjoying the beauty of a story or poem being read aloud. It means getting ideas, reshaping them, adding bits of one's self and then, sharing this new thought with others. In its higher development, communication may be classed as creative expression."

The article on getting more exact meanings from printed materials fits into both the language arts and the social studies as well as other areas not a part of the chapter. Then the final two articles touch on the social studies proper: one on textbooks, the other on using maps in community study.

More Exact Meanings from Printed Materials

By C. EDWARD HAMILTON
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Most classroom teachers and elementary-school principals agree that the printed page remains the primary instructional material in today's elementary school. New and improved reading materials in increasing volume are found in the modern school alongside their kin, the more spectacular instructional mediums such as films and models. We recognize the need for the further development and use of all instructional materials, but we wish to restrict this article to some of the problems of accuracy in printed materials.

How can printed words be fashioned into sharper instructional tools? Such probing demonstrates that pupils will profit in these ways:

1. Securing the meaning intended by the author
2. Sensing that words have different meanings and shades of meaning depending on context
3. Understanding similes and figures of speech
4. Recognizing fact, fiction, phantasy, opinion, and editorializing
5. Identifying emotionally charged words
6. Discovering that sources differ in their treatment of the same information and that constantly expanding knowledge changes facts
7. Recognizing that authors and publishers are fallible and, as a consequence, written material may be incorrect, ambiguous, or misleading
8. Realizing that honest differences of opinion are both possible and sanctioned.

Application in the Classroom

Certain of these areas have greater applicability to the intermediate grades than to the primary grades. However, the primary-school teacher, weighing the ability and maturity level of her

pupils, will find some opportunities upon which to capitalize since most areas lend themselves more to incidental learning than to instruction of a formal nature.

For example, in a primary room the teacher expected the children to associate the word *overalls* with work, but to these pupils in a neighborhood made up mostly of white-collar and professional people, overalls were associated with play. The teacher then realized that it was necessary to develop the new concept before proceeding with the lesson.

In a fifth grade during current events period two groups of pupils held opposing views of the "facts" of a news release. It evolved that the groups had read different daily newspapers. Later editions and an analysis of the reports resolved the disagreement. Pupils were encouraged by the teacher to study and to evaluate the headlines, reporting, and advertising of the two papers.

The pupil who has made such expressions as "I have crossed the Rubicon" and "looking a gift horse in the mouth" a part of his fund of knowledge is to that degree able to read with greater understanding and appreciation.

Sources Differ in Treatment

To meet the requirements of a course in anthropology, the writer made a comparative study of the accuracy and point of view of the authors of children's books on Eskimo life and Eskimo culture as presented in scientific and anthropological studies. The findings have some significance for this discussion. The scientific studies made sharp distinctions between the Eskimo unaffected by the white man's culture and the so-called "mongrel." None of the children's books made this line of demarcation clear. A number of the books, particularly those of recent copyright, presented a true picture, while others tended to confuse the two cultures. Still others give children misconceptions and inaccurate information. The books about the "mongrel" Eskimo are apt to subordinate Eskimo culture to the plot of the story and might well be labeled fiction. Therefore, it is clear that some children's books are unsuitable for reference activities. One could conclude that the child might or might not secure an accurate picture of Eskimo culture.

Authenticity of Materials

Great reliance is placed on publishers of books for children because of the competency of their research, writing, and editorial staffs. But this does not relieve the profession of responsibility for seeing that children are using authentic materials. Teachers and principals have very limited time available for studies of authenticity; nevertheless, they might take some constructive steps. As a rule, a number of sources can be consulted in reference work. Teachers can use source materials not available to or appropriate for children. They themselves can adopt a middle course between blind acceptance and overzealous skepticism of written materials. They can encourage their pupils to keep an open, inquiring mind. For example, in a second-grade class a child questioned how a certain character in her reading story knew the dog's name. When the children reviewed the story, they found that the book did not tell. The class then wrote a letter about it to the publisher.

Thru similar activities the teacher can foster the growth of respect for the intricacies of the written word, discrimination in the choice of materials, ability to read for meaning, appreciation of the importance of checking for authenticity, ability to think analytically, and attitudes of healthy questioning of written material rather than blind acceptance because "it says so in the book or newspaper."

Role of the Principal

Elementary-school principals are in an ideal position to exert a positive influence upon school staffs and pupils for critical use of printed materials. Here are a few ways: (a) When promotional policies, grouping procedures, marking systems, and instructional programs are formulated, all available research and opinion should be evaluated before final decisions are reached. Teachers are thereby involved in a real problem with meaning for them. (b) The staff should be encouraged to use publications such as the series, "What Research Says to the Teacher," published by the Department of Classroom Teachers. (c) Teachers should be encouraged to explore, with their pupils, the means whereby written materials can make the highest contribution to the instructional program.

Adjusting the Curriculum for Bilingual Children

By EDNA C. HICKEY
Principal
Franklin School
Chicago, Illinois

WHEN Franklin School opened in September 1953, many non-English speaking Puerto Ricans enrolled. It was a difficult task to communicate with these children and their parents, but with interpreters and our meager knowledge of Spanish, all children were placed in classrooms. Children from five to 15 years of age came to our doors. Some of the teen-agers had never attended school, and others had had limited schooling in Puerto Rico. After the first week of enrolment, we discovered our school population of about 700 children was over 10 percent Puerto Rican.

Staff Reading for Background

Hitherto, Puerto Rico had been only a place on the map. The teachers quickly came to grips with the problem. At a faculty meeting they identified their problems and recognized an immediate need for a better understanding of the background and way of life of our Puerto Rican children.

A group of teachers gathered source materials for reading for better understanding.[1]

Ways of Adjusting the Curriculum

The second problem area was the need for communication; so again, we searched for materials. This time the search was for methods and technics for teaching English to Spanish-speaking children.

We were not the only school confronting this problem in

[1] Monserrat, Joseph. *Background and General Information on Puerto Rico and the Puerto Rican Migrant.* New York: Migration Division, Puerto Rico Department of Labor (21 West 60th Street), 1952. 9 p. (Mimeographed)

Chicago. The Department of Instruction and Guidance helped us greatly by suggesting reading references for the teacher and materials for the children. *Teaching Spanish-Speaking Children*[2] and *The Teaching of English as a Foreign Language*[3] were our guide books for methods. With background from these sources, creative ideas for teaching English flourished as teachers set to work.

Many problems arose. For example, there were difficulties in the lunchroom. The diet of the Puerto Ricans is quite different from our lunchroom menu. Consequently these children did not care to eat the lunch offered or to drink milk. Since it was understandable, and they did need lunch, we included in our menu some of their favorite dishes. Gradually, however, the Puerto Ricans tasted our foods, and now many of them eat our nutritious lunch with enjoyment. But those first weeks in the lunchroom were a struggle.

In the classroom the unit method of teaching provides many opportunities for the Puerto Rican children to make contributions. Such an opportunity appeared in a third-grade unit of "Children Around the World." Another opportunity was created when one of our first-grade teachers developed a unit entitled "A Good Breakfast" with a group which included many Puerto Ricans. They learned about our manners and eating habits, in addition to experiences with new words. The culminating activity was preparing and eating breakfast in school.

We also worked with the parents. They were encouraged to attend English classes at evening schools and Americanization classes. Letters giving information about these classes were written in Spanish and sent home.

Another educational problem was that of placement in classes. A child is placed in a class which is no more than two years below his age group. For example, Juan completed the fifth grade in Puerto Rico altho he was 13 years old. He spoke no English. He was placed in the fifth grade in September 1953. With his desire to learn English and his interest in school he succeeded, and he

[2] Tireman, Lloyd. *Teaching Spanish-Speaking Children*. Albuquerque: University of New Mexico, 1948. 218 p.

[3] Bumpas, Faye L. *The Teaching of English as a Foreign Language*. Washington, D. C.: Educational Services, 1952. 90 p.

was recommended for sixth grade in January 1954. By June of 1955 he graduated from the eighth grade with a ninth-grade reading level. When a child grasps the language and adjusts to school, he often progresses rapidly, making it possible to advance him to a higher grade before the end of the term.

A special teacher became available to give remedial work in English to small groups. In addition to helping the Puerto Rican children with their English, the special teacher has become their counselor and friend. Thru her they have a sense of security because there is someone to whom they can go when problems arise. She helps teachers by giving them more knowledge of the problems of adjustment for these children.

Evaluating Our Efforts

Almost two years have passed since our first Puerto Ricans arrived. Because they are a transient group, many of them have transferred from our school to others, but many new Puerto Rican children have entered.

Our Puerto Rican children are happy at Franklin School—one of the best results of our efforts. The school has become the place where parents come for advice and assistance. Our staff has secured medical aid, welfare clothing, jobs, and housing for individuals. The Parent-Teacher Association also has done its part to orient these people. We have broken down our prejudices. The children are learning the English language well. There is a warm spirit and an eagerness to help one another. And the other children are learning to respect and appreciate their new friends.

Other schools face problems created by transient populations and by children from minority groups. Some aspects of such problems are similar to the difficulties we encountered with our Spanish-speaking children. Perhaps some of our ideas can be adapted by such school staffs that are ready to take action.

Materials Used with the Children

We used a variety of books and visual aids for teaching. These children also enjoy singing their native songs. A list of sources of information and materials is appended:

Background Information

* Monserrat, Joseph. *Background and General Information on Puerto Rico and the Puerto Rican Migrant.* New York: Migration Division, Puerto Rico Department of Labor (21 West 60th Street), 1952. 9 p. (Mimeographed)

* Office of Commonwealth of Puerto Rico. *Know Your Fellow American Citizens from Puerto Rico.* Washington, D. C.: the Office (2210 R Street, N. W.). 63 p.

* Office of Commonwealth of Puerto Rico. *General Information—Puerto Rico.*

Guide Books for Methods

Tireman, Lloyd. *Teaching Spanish-Speaking Children.* Albuquerque: University of New Mexico, 1948. 218 p.

Bumpas, Faye L. *The Teaching of English as a Foreign Language.* Washington, D. C.: Educational Services, 1952. 90 p.

Books for Teaching English

English Language Research, Inc. Books I, II, III, and IV. Boston: Houghton Mifflin Co., 1943. (Workbooks and teachers' guide accompany this series.)

Rojas, Pauline M., and others. *Fries American English Series: For the Study of English as a Second Language.* Books I, II, III, and IV. Boston: D. C. Heath and Co., 1952.

Learning To Think Series: Thurstone, Thelma Gwinn. *The Red Book.* Chicago: Science Research Associates, 1947. Thurstone, Thelma Gwinn. *The Blue Book.* Chicago: Science Research Associates, 1948. Thurstone, Thelma Gwinn. *The Green Book.* Chicago: Science Research Associates, 1947. (Lesson Charts and Teachers' Manuals accompany this series.)

Wright, Wendell W. *The Rainbow Dictionary.* Cleveland: World Publishing Co., 1947. 433 p.

Richards, Ivor A., and Gibson, Christine M. *A First Workbook of English.* Washington, D. C.: Educational Services.

Educational Services. *Beginners' Book for English as a Second Language.* Washington, D. C.: the Services, 1952. 120 p.

Richards, Ivor A., and Gibson, Christine M. *English Through Pictures.* Washington, D. C.: Educational Services, 1950. Also available from Pocket Books, New York.

Dolch, E. W. *New Type Picture Word Cards in Spanish, Group Word Teaching Game, Picture Word Cards, Basic Sight Vocabulary Cards, Sight Phrase Cards, Popper Sets I, Popper Sets II, Matching Sets I, Matching Sets II.* Champaign, Ill.: Garrard Press.

Laubach, Frank C. *Streamlined English.* New York: Macmillan Co., 1951. 111 p. (Teachers' manual available.)

* Free copies available from Commonwealth of Puerto Rico, Department of Labor, 21 West 60th Street, New York, N. Y.

Castillo, Carlos, and Bond, Otto F. *Spanish Dictionary*. New York: Pocket Books, 1948.

Audio-Visual Materials

Basic English with Titles to accompany *English Through Pictures*. Washington, D. C.: Educational Services. (Set of eight black and white strips, $15.)

Basic English Without Titles to accompany *English Through Pictures*. Washington, D. C.: Educational Services. (Set of eight black and white strips, $16.)

*A *Girl from Puerto Rico*. 16 mm. Color and sound. 15 minutes. How a girl newly arrived from Puerto Rico and her fellow students in a New York City school learn to know and to adjust to each other. Department of Education, Commonwealth of Puerto Rico.

**El Puente (The Bridge)*. 16 mm. Sound film in black and white. Running time: 51 minutes. This entire story actually took place. "The Bridge" offers a step-by-step record of one of the many similar community projects stimulated by Puerto Rico's Division of Community Education. Department of Education, Commonwealth of Puerto Rico.

Song Books

Munoz, Maria Luisa. *Canciones de Navidad*, San Juan, 1950. (Festival de la Navidad de 1950.) Twenty Christmas songs, music and words. (Available from the Department of Labor of Puerto Rico, 21 W. 60th St., New York, N. Y. Free.)

Henius, Frank, editor and translator. *Songs and Games of the Americas*. New York: Charles Scribner's Sons, 1943. 56 p. (Contains Puerto Rican items.)

Beattie, J. W., and others, editors. *Puerto Rican Singer*. New York: American Book Co., 1948. 219 p.

Sources of additional information

Office of the Commonwealth of Puerto Rico, 2210 R Street, N. W., Washington, D. C.

Commonwealth of Puerto Rico, Department of Labor, Migration Division, 21 W. 60th St., New York, N. Y.

Commonwealth of Puerto Rico, Department of Labor, Migration Division, 750 South Wabash Avenue, Chicago, Illinois.

Commonwealth of Puerto Rico, Economic Development Administration, and Visitors Bureau, 579 Fifth Avenue, New York, N. Y.

Commonwealth of Puerto Rico, Economic Development Administration, 79 West Monroe Street, Chicago, Illinois.

Economic Development Administration, 530 West Sixth Street, Los Angeles, California.

* Free rental from Department of Labor of Puerto Rico, 21 W. 60th St., New York, N. Y.

Teaching the English Language to Non-English Speaking Children

By J. T. JOHNSON
Principal
and ALMA BLANCO, TULIA WINTON, PAULINA CEPEDA
Primary Teachers
Lincoln School
El Paso, Texas

SEVERAL years ago when we began working together at Lincoln School, we realized that teaching English as a foreign language was a challenging problem. Almost all the children entering first grade could not speak English.[1] Perhaps one or two could say, "Good morning," and a few might be able to say *teacher* and *school*, but that was about the limit of their proficiency in English.

We had been following a partially developed reading readiness program. The materials we used most included pictures, books, charts, crayons, paints, and paint brushes. We recognized the effectiveness of pictures in helping children associate words with images, but we still were not satisfied. People, animals, and things in pictures lacked something: shape, weight, movability, touchability. We began to sense the need for supplying our first-grade rooms with all kinds of objects for which the child had words in his own language, but for which he had no vocal symbol in English. So we set out to provide more suitable materials for these children. Our goal was to match experiences with all the words they would meet in their first year of school.[2]

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[1] According to Professor Sanchez of the University of Texas, there are more than one million Spanish-speaking people in Texas alone, approximately one-sixth of the population.

[2] Much work has gone on before in teaching Spanish-speaking children to speak and to read English. Professor Manuel of the University of Texas has worked on the problem for many years. In El Paso, classroom teachers under the leadership of the director of instruction, Byron England, have developed some effective methods of teaching English to children of Spanish background. Some of their work is published under the title, *Manual of Aids and Devices for Teaching Beginning Non-English Speaking Children*, Levels one and two. Our project also has the full support of Alta Stowell, primary supervisor.

Courtesy of J. T. Johnson, El Paso, Texas

Alma Blanco, Lincoln School, El Paso, teaching vocabulary to a group of non-English speaking first-grade children. Mrs. Blanco speaks English and Spanish equally well.

Our Two Goals

The problem of the first-grade teacher of these non-English speaking children is twofold: He must help the child acquire some proficiency in English, and he must teach the regularly prescribed course of study. At Lincoln School we concentrate on the first goal and work toward realizing the second goal. We try to associate as much of what a child can touch, feel, smell, taste, see, and hear with symbols which can be used when the objects are removed. Once this is accomplished, the child is ready to recognize the written symbol.

There are many ways to provide experiences. For the child who knows no English, such activities as washing his hands in his schoolroom, or at a lavatory, with soap and towels from dispensers, can be quickly and easily used for teaching English equivalents.

The little first-grade boys who like trucks do not have to be drilled into knowing how to ask the teacher for the trucks. The same goes for the little girls who like dolls. Holding these prized toys out of reach creates the incentive to learn how to ask for them in English.

The more real the object, the more effective it is as a learning medium for building vocabulary. The buggy that rolls, the train that runs, the doll that cries, the telephone that rings, the iron that heats are the kinds of objects we have in mind. Such objects offer rich opportunities for putting verbs with nouns to express ideas.

In art we give the child free access to materials needed for original work in cutting, pasting, painting, drawing, costume making, building, papier-mâché modeling, and clay modeling. Tied in with each activity is a wealth of opportunities for teaching vocabulary. Thru oral expression, dramatization, story telling, conversation, and singing we tie together the bits of vocabulary which the child catches in connection with his creative art and play. Thru writing we permit the child to create for himself the sound images which he has learned to associate with certain objects and actions.

Beyond this we teach children vocabulary in setting up the general routine of their school day. For instance, duties like passing out supplies, taking care of library books, answering office calls, being housekeeper, leading songs and games, and being teacher for a small

group offer splendid opportunities for increasing the word-symbol concepts of the children.

We get some help from the parent-teacher associations. In the absence of an organized kindergarten program, the PTA's have organized classes for five-year-olds with the idea of giving them some basic English words before they enter the first grade. These parents have used materials from our primary rooms for teaching vocabulary and have found them effective.

A Measure of Progress

Up to the present we have made considerable progress in speeding up the acquisition of English words by the non-English speaking, beginning first-grade child. Only a few years ago all such children stayed in the first grade a full year and a half, but now they stay only one year and have a better command of English. It is our belief that, as we continue to add to and organize units of work around these materials, we shall continue to see a speed-up in the acquisition of English vocabulary with its consequent proficiency in oral and written expression.

Stimulating Creative Expression with Help from the Library

By JEAN LOWRIE
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Western Michigan College
Kalamazoo, Michigan

THE art of communication is one of the most intangible and yet most important phases of learning. Communication means listening—trying to understand what another person is saying, enjoying the beauty of a story or poem being read aloud. It means getting ideas, reshaping them, adding bits of one's self, and then sharing this new thought with others. In its higher development, communication may be classed as creative expression.

One effective means of stimulating creative expression in children is children's literature. Children soon learn the joys of listening and, a few years later, the joys of reading. They are curious and are delighted to find answers to their questions in a wealth of materials available in their school library. A discerning teacher or librarian guides this reading so that children may share knowledge, beauty, humor, or strange and exciting experiences with their fellow classmates.

Such guidance must also be directed toward high values. The quality of writing in the best children's literature today arouses a response in the mind of the reader which helps him to develop standards of criticism. He will learn how to seek out those books which have the same strength of beauty and feeling. He will demand accuracy in books of science, history, and biography. He will expect his "funny" stories to be clever, humorously rib-tickling or subtle, but not ribald and cruel. He will demand honesty and integrity of purpose, so that he may freely and easily explain to his fellow classmates why this book has been a source of pleasure for him. Introducing children to these kinds of books opens new horizons for creative expression for groups of them and for individuals.

Creative Expression by Groups

An experience which began with the oral reading of *The Silver Curlew*[1] to a group of fifth-graders indicates how interest and imagination can spread. These pupils listened with excitement to this new adaptation of a favorite English folktale, "Tom Tit Tot," and, as they heard the delightful descriptions of King Nollikens and his Nanny, Mother, Doll, and Poll, they adopted them as their own friends. They began to add some of the descriptive words to their own vocabulary, such as *flummoxed*, and they continually greeted the librarian in the hall with questions about what was going to happen next. Finally, teacher and pupils decided they must share part of the story with the whole elementary school thru a puppet show.

A committee set to work choosing which part of the story should be shared and writing a script. Another group began making the puppet characters, and still others made the necessary props and setting. These fifth-graders put on a performance which was received hilariously by all the children.

This experience was followed by a spurt in the reading of fairy tales and folklore which was a welcome outcome, since this branch of literature has been neglected lately because of the demand for science, biography, and "true" books. There also developed a rash of reading Sandburg's *Rootabaga Stories*,[2] Vachel Lindsay's poetry, and Robert Lawson's inimitable stories.

Taking Off from Book Week

Book Week always leads to many sharing experiences. *The Fourth-Grade Gazette* printed a special Book Week edition in which the pupils reviewed favorite books. This edition included many drawings that advertised the joys of reading and illustrated the reviews. The fourth grade also chose to share a book thru the medium of fist puppets. Norton's *The Borrowers*[3] provided an excellent source for this bit of creative communication. It necessi-

[1] Farjeon, Eleanor. *The Silver Curlew*. New York: Viking Press, 1954. 192 p.
[2] Sandburg, Carl. *Rootabaga Stories*. New York: Harcourt, Brace and Co., 1936. 218 p.
[3] Norton, Mary. *The Borrowers*. New York: Harcourt, Brace and Co., 1953. 180 p.

tated the writing for the paper of a special article on the book, the author, and the show itself; it also meant writing a script and designing the characters and setting.

Preparing for Camping

In preparing for a three-day camping experience, the fifth- and sixth-graders produced a Camp Handbook. The Handbook contained not only the program, but also essays and poems by the pupils on the purposes of camping, the points to be noted when reading books in preparation for camping, and guides to evaluation of the camp experiences.

The preparation for the camping experience also included the development of the general theme, "Communities Are Interdependent." Nonfiction, such as *You and Democracy*,[4] *Democracy*,[5] *Put Democracy To Work*,[6] and *You and the Constitution*,[7] inspired a group of girls to write the following for the Handbook:

WHAT IS A GOOD COMMUNITY?

Is it people working together
regardless of any strife or weather?
Is it homes where privacy is assured
and families' happiness can be secured?
Is it schools where children grow
and democracy they learn to know?
Is it factories working night and day
to speed production on its way?
Is it parks that are places of beauty and rest
with children's playgrounds of the best?
Is it highways leading in and out
to carry people and products about?
Is it different churches where you pray
and serve your God in your own way?

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[4] Gordon, Dorothy. *You and Democracy*. New York: E. P. Dutton and Co., 1951. 59 p.

[5] Alexander, Ryllis C., and Goslin, Omar P. *Democracy*. New York: Harcourt, Brace and Co., 1940. 59 p.

[6] Wagner, Ruth H., and Green, Ivah E. *Put Democracy To Work*. New York: Henry Schuman, 1952. 132 p.

[7] Witty, Paul A., and Kohler, Julilly. *You and the Constitution of the United States*. Chicago: Children's Press, 1948. 57 p.

Is it government that listens to you
and does what the majority wants it to?
Is it a place where music and art flourish
and the minds of men ever shall it nourish?
Is it housing of the best for all
and there are no slums large or small?
It is all these things put together
which will make a community go on forever.

Telling Stories

Books which lead to self-expression in story writing, storytelling, or flannelboard presentation are all channels of communication which promote growth of understanding and appreciation within the school community. *The Three Sneezes, and Other Swiss Tales,*[8] the inimitable *Winnie-the-Pooh,*[9] *Ghosts and Goblins*[10] are all good sources for encouraging children's own storytelling.

Painting Murals

Two groups of books plus a visit from the author stimulated several forms of expression in the sixth grade. In reading Clara Ingram Judson's "They Came from . . ." stories and her excellent biographies of American presidents in preparation for her visit to the school, the children were inspired to paint large colorful murals and make bright mobiles. Favorite episodes from these books were written up as short plays and presented to the school, parents, and visiting college classes. An excellent feeling for the themes of these books, as well as an interesting choice of events, was demonstrated.

This particular project was also a help in coordinating the sixth-grade interpretation of its own background in relation to the people of other lands. It was necessary for them to read for information, pleasure, analysis, interpretation, and creative writing in order to share understandings and experiences.

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[8] Duvoisin, Roger A. *The Three Sneezes, and Other Swiss Tales.* New York: Alfred A. Knopf, 1941. 245 p.

[9] Milne, Alan A. *Winnie-the-Pooh.* New York: E. P. Dutton and Co., 1926. 158 p.

[10] Harper, Wilhelmina. *Ghosts and Goblins.* New York: E. P. Dutton and Co., 1936. 271 p.

Creative Expression by Individuals

Binn's *Sea Pup*[11] provided a means for reaching one sixth-grader who seemed almost "unreachable." The story revolves around a young lad living a rather lonely life with his parents near Puget Sound. He adopted a baby seal and had a variety of highly amusing, sometimes sad, experiences. The appeal of the story to the young listener was tremendous, and of his own accord he created a delightful mobile of Buster dancing to multicolored musical notes. The mobile was placed in the library and a new relationship was created between librarian and pupil because a means of communication had been discovered.

Emotions and feelings are often difficult for the intermediate child to express. But one teacher during Brotherhood Week read some of William White's writing. A sixth-grade listener was filled with a sense of the frustration and the bewilderment which is often found today. She expressed herself this way:

IS IT ANY WONDER?
Is it any wonder
That the world is full of hate?
Is it any wonder
That death is used as bait?
Is it any wonder
When just for foolish pride
Men will steal and even kill
And take it in their stride?

Is it any wonder
That when the night grows near
Men will huddle in the dark
And just for hateful fear?
Is it any wonder
When the winds blow with pain
Men will fall and then
Will never rise again?

In the sixth-grade room there is a large scrapbook entitled *32 Royal Authors* which contains poems, stories, and essays that resulted from discussions of experiences in books and stories which the pupils had read and heard. These pieces of creative expression are avenues for sharing feelings, ideas, and thoughts of individual children with each other.

[11] Binns, Archie. *Sea Pup*. New York: Duell, Sloan and Pearce, 1954. 215 p.

A Few Hints on Books

It is not always necessary to turn to the unusual or to look in out-of-the-way places for effective learning materials. Books are still a means for developing technics of self-expression. However, there are a few points to keep in mind which may help one to achieve rewarding results with this medium. A knowledge of what is available in the field of children's literature, current and otherwise, is basic. Informing classroom teachers is one way in which the school or public librarian can work effectively. The highest standard should be followed when choosing books for children because many times they go for the best if given the opportunity. But that best can be only as high as the contacts children have. Accessibility, too, is important as well as sympathy and understanding toward the individual's or the group's needs and interests. An attempt to motivate by means of *Blue Willow*,[12] for example, when the need is for *Call It Courage*[13] can be disastrous, no matter how excellent the information.

Children need only to be given wings to soar. The many books offering beauty, respect for humanity, and lasting truths, which are available today for our boys and girls to read, can truly develop communication skills, in themselves expressions of creativity.

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[12] Cates, Doris. *Blue Willow*. New York: Viking Press, 1940. 172 p.
[13] Sperry, Armstrong. *Call It Courage*. New York: Macmillan Co., 1940. 95 p.

The Basic Textbook in Elementary Social Studies

By GENE LANGAN
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WHAT is the place of the basic textbook in the social studies? Many authorities favor some plan of using multiple reading materials. Under such plans the classroom teacher must build the instructional program without sole reliance on the individual text in each child's hands. This method challenges the ingenuity of the teacher and urges him on into the problem of teacher preplanning and teacher-pupil planning—essentials in the modern social studies instructional pattern.

Underlying this procedure for an improved social studies program is the assumption that, in the past, the textbook has always been the master and the teacher always the slave. This assumption is hardly fair. Thru the years the good teacher has supplemented the traditional presentation of textbook content with applications to current environment. Twenty-five years ago teachers were already beginning to make more flexible use of the textbook and were employing supplementary books and other available instructional aids to bring school subjects to life in the lives of their pupils. This modern trend has been felt in (a) textbook construction, (b) unit teaching, and (c) curriculum reorganization.

Textbook Construction

Textbook writers and publishers, sensitive to the increasingly reliable data on teaching and learning, have aided in bringing about a more vitalized program by incorporating suggestions for new practices in their books. The modern textbook, with its improved organization, style, suggested teaching aids, and general attractive-

ness, reflects the best thinking of social studies experts and is an excellent source for newer methods.

For example, not long ago the study of geography consisted chiefly of a recitation of facts. Little attention was paid to causes, relationships, and results. The pupils were expected to memorize geographic facts as they did the multiplication tables. As geography embraced broader concepts, a new approach to teaching developed which necessitated the reorganization of geographic subjectmatter.

In the same way the modern social studies textbook has kept pace with the changing role assigned the social studies in the elementary-school curriculum. Some of the current trends of the social studies instructional pattern are described by Michaelis[1] as: (a) the unified approach, replacing the teaching of social studies as separate periods of geography, history, and civics; (b) increasing emphasis on democratic goals, international affairs, and intergroup education implemented by use of group processes in the classroom; (c) stress on relating social studies programs to developmental levels of children; (d) planning programs in recognition of community needs and conditions; (e) planning on the basis of broad units of work; (f) increasing the emphasis given to problem-solving technics; (g) using a variety of learning experiences, replacing the old "read-recite" procedure; (h) continuous, cooperative evaluation and use of varied evaluation technics instead of complete reliance on pencil and paper testing.

In a review of many of the recent basic social studies texts, we found that they are being written to fit the unified studies approach and the other newer trends. The content is interwoven to present a continuous program of interrelated materials from geography, history, civics, and other areas. It is organized so that the teacher can easily use the text as a springboard for drawing on materials from art, music, health, language arts, and other areas of the curriculum, as needed in the study of the various problems and topics.

All textbooks, however, assume the presence of a teacher guiding the learning. Good textbooks assume the use of other materials and do not try to be sufficient in themselves. And the good teacher uses all available resources for the purpose each serves best.

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[1] Michaelis, John U. *Social Studies for Children in a Democracy*. New York: Prentice-Hall, 1950. p. 24-28.

The Basic Text and Unit Teaching

Unit teaching is an attempt at getting away from the memorization of facts and details as ends in themselves. The aim of the unified approach is simply to teach youngsters better than they have been taught before.

Teaching by the unit method makes use of all the best parts of old technics. The textbook remains the primary source of information, but children are taught to consult other sources as well. Facts and details are means of acquiring basic understandings. More careful planning and thinking in larger areas and in terms of broader concepts are necessary in the execution of good unit instruction.

Educational research supports the advisability of employing a wide variety of experiences and resources in teaching. Use of audio-visual aids, forms of creative expression, community resources, and a variety of reading materials have been incorporated into the social studies courses of most schools to enrich the program. Yet, while children are provided with sufficient materials at their levels, the basic textbook can still be used as a common basis in unit teaching.

The Textbook in the Curriculum

In a framework of comprehensive social studies units a single basic textbook, supplemented and complemented by additional text references and perhaps a social studies library, presents an effective arrangement for enriched learnings.

The problem of the basal textbook must be treated as it relates to the social studies program. The social studies program must be studied for its place in the whole elementary-school instructional pattern which means an evaluation of curriculum offerings in terms of the nature of the pupil, principles of learning, the nature of society, and the function of the school in society.

If the curriculum be simply inert subjectmatter to be poured into pupils, the program might be evaluated by checking how well the materials of the basal textbook have been covered. But the curriculum cannot be considered apart from the pupil.

Hanna makes the point that both content and method are indispensable to a balanced curriculum. He disagrees with those who

say, "We teach children; we do not teach subjectmatter." And he goes on to say: "Children learn *something* and we are definitely concerned that this something be good subjectmatter. I cannot agree with some who say that *any* content is of equal value with *any other*, or that content generally must be subordinate to process."[2]

Hanna advocates a psychologically and socially sound elementary-school curriculum structured in scope of content and in sequence of major themes. His proposed arrangement is similar to the order followed in most modern social studies texts. The specialists in social studies have tried to assure coverage of significant topics while at the same time they have geared the content to the maturing capacity and interests of children. Once provided with a master scope-and-sequence design, the teacher can go beyond experiences suggested in the basic text for common learnings and strive to cultivate the wide range of individual interests and talents of his pupils.

It requires skill to teach by using a wide variety of instructional materials. In the building of this skill, the single text is valuable as a base from which to depart and to which to return. The better teacher has already shown ability in widening the scope of his instructional activity to incorporate the improved practices. But to suddenly deprive the average teacher of the single text may be inviting danger. The teacher may become overwhelmed with the magnitude of the task, and the children may wind up by acquiring a conglomeration of scattered bits of information with no basic understandings and no tie-up of ideas.

The movement for greater differentiation of curriculum materials should be gradual. Thru good administrative and supervisory aid augmented by a well-planned inservice training program, the teacher can be educated to the value of enriching his program thru the use of many instructional resources. The basic textbook is no obstacle in the path of such improvement, but rather it should serve as the source of ideas for attaining more effective teaching and more complete learning.

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[2] Hanna, Paul R. "We Teach Both Subjectmatter and Children," *Journal of the National Education Association* 43: 273; May 1954.

Recording on Maps

By HERBERT H. GROSS
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Concordia Teachers College
River Forest, Illinois

LEARN by doing. Doing what? Seeing! Seeing what? First and foremost, whatever happens to be near you.

Obviously, seeing is not the only kind of doing in the educational process, but it is one kind, and an important kind. Observation is a commonly accepted primary step in the scientific method, a method which is appropriate to any grade level.

Recording Data

Another step in the scientific method is recording. Data can be recorded in a variety of ways, but for certain types of information a map serves best.

Much information which needs to be accumulated for the study of a community can be recorded conveniently and effectively on a map. From our experimental work with recording the man-made features of a community on a map, we believe that it is an academically rewarding activity at all grade levels.

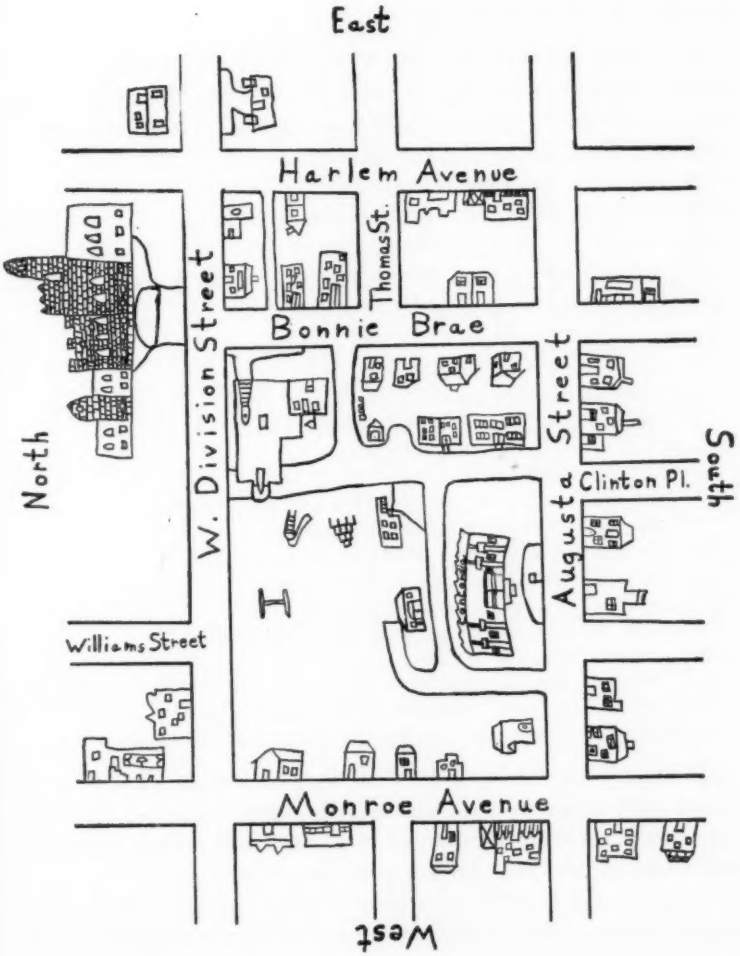
In the Primary Grades

How is the recording done? In the primary grades, the classroom teacher draws on a sheet of paper, at least 3 feet by 3 feet, the pattern of the streets adjacent to the school. About two blocks in each direction from the school is an acceptable range. The map is put on a table or on the floor and oriented correctly. The compass points are printed along the edges of the map. The teacher puts on the names of the streets. The children then put on the map whatever they observe in the way of such features as houses, churches, and stores.

Primary children tend to record pictorially in color. They tend to exaggerate the size of what they see. A black and white reduction

Figure I

MAP DRAWN BY PUPILS OF GRADE I



of a colored map prepared by a first grade is presented in Figure I. Some items in the landscape were omitted, but the power of observation increases with practice and maturation.

The experience taught the children: (a) to make accurate observations, (b) to differentiate between features in the observable landscape, (c) to recognize the uses of the different kinds of man-made features, (d) to become acquainted with map functions.

Beyond the Primary Grades

The pupils in Grades IV thru VIII worked with a village (River Forest, Illinois) street map on which to record. The outline map was 8 inches by 10 inches, which was convenient for fitting into a notebook. Furthermore, since the community is two miles from north to south and one and one-half miles from east to west, a scale of five inches to the mile proved to be simple and serviceable. Figure II is a reduction of the outline map.

A special sheet of map symbols was available for each of the pupils. It covered recording data such as these:

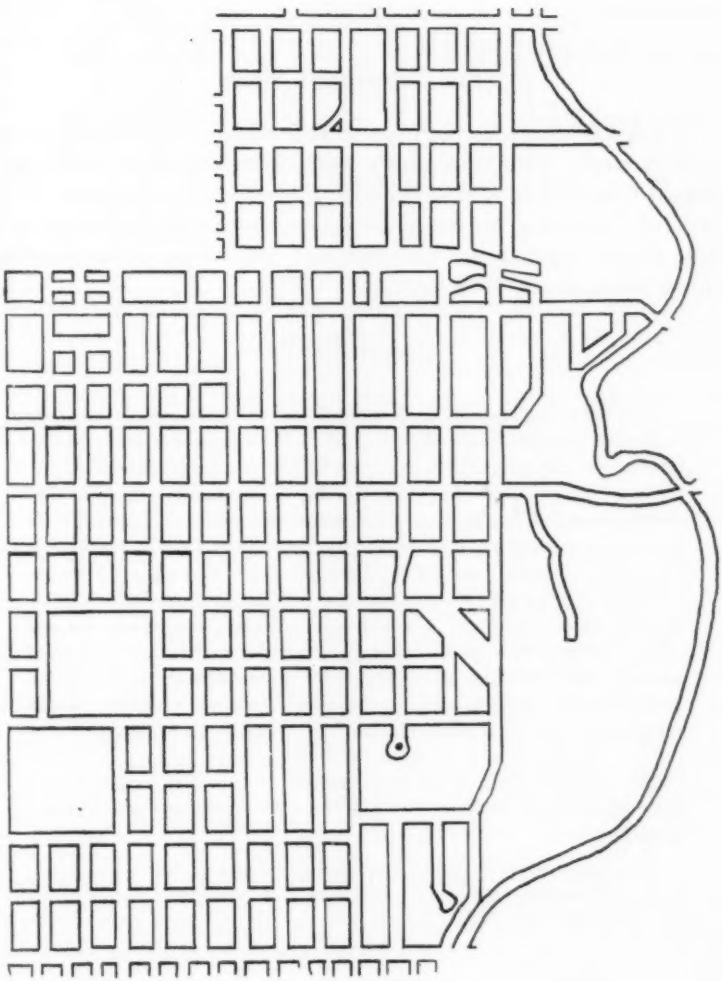
1. Compass (points)
2. A scale line (5" = 1 mile)
3. Names of the thru streets
4. The bus lines (two rows of dashes)
5. The railroads (lines with crossties)
6. The river (blue)
7. The pupil's home (a square with a roof and chimney)
8. The pupil's school (a square with a flag)
9. The route from home to school (a continuous line)
10. The pupil's church (a square with a cross)
11. The library (a square with an L in it)
12. Forest preserves, parks, playgrounds (green areas)
13. A grocery store (brown square)
14. A factory (diagonal lines)
15. A department store (crossed diagonal lines)
16. Public buildings—city hall, fire and police stations (red).

Obviously, the nature of the base map and what should be recorded on it varies with the community being studied. There may also be differences of opinion as to the symbols which should be used altho certain patterns are quite standard.

What are the benefits of a project of this nature? The pupils learn to observe their immediate surroundings more keenly. They

Figure II

OUTLINE MAP OF RIVER FOREST, ILLINOIS



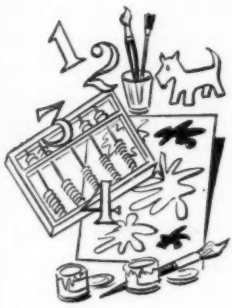
learn about the man-made features of their community. They learn to recognize the distinctive and distinguishing man-made elements of their community as contrasted with those of other communities. They become acquainted with map technics. They learn to assemble and convey information by recording it on a map. Ultimately, they learn to use the recorded data for observing and interpreting relationships among the man-made features of the community.

For Community Study

What has been presented is a technic which contributes to community study. That community study is important is rarely questioned today. How it is studied best is debated sometimes. Why not try "recording on maps" as one of the methods? Maps may help pupils organize and communicate some types of information much more lucidly than words.

The ideas, experiences and cooperation of many people are continuously required to develop and select the equipment and supplies needed for the educational program of the good elementary school. Society thru the schools, should make its investment in time and money count. Changes are taking place—in science, in industry, in geography, even in our knowledge of history. No school is making the best return on the investment of society if the materials it uses are out-of-date. Many persons—teachers, principals, consultants, superintendents, college professors, writers, publishers, manufacturers and others—engage in scientific research to produce increasingly improved learning materials such as useful and hygienic school furniture, improved textbooks and reading materials, practice exercises, audio-visual aids, science equipment, and all other types of learning materials. Continuous evaluation in terms of durability, suitability, quality and educational results is needed to insure retention of the most effective materials and to eliminate the inefficient and the less effective.

—BARNETT, GLENN E., and BURKE, CASEEL D. "Cooperative Study of Elementary Education in California." *National Elementary Principal* 34: 12; February 1955.



CHAPTER
FOUR

Instructional Materials in Arithmetic and Art

This chapter, by combining two fields, continues in the pattern of Chapter Three. If one believes in the importance of flexibility, freedom, and personal experience in art and wants these qualities for other school subjects, then any of them could contribute to this chapter. We do not ask for this contribution from arithmetic to art but desire only that the articles from the two fields may be presented.

Two articles are on instructional materials in arithmetic. Provision for meaning and insight is stressed in the first. It points out that sensory aids are good helps when they are needed and that children will discard them after mastering concepts. The second article reports on experimental work with using the abacus and the adding machine. Final results on the experiment should become available late in 1956 or early in 1957.

From the three articles on art, classroom teachers and elementary-school principals should glean many ideas for their schools. There are suggestions for using otherwise discarded materials. Then there is some information on the free and inexpensive materials that may have value for art. Along with the materials are suggestions for classroom teachers. If you are interested beyond what is presented in the articles, the footnotes indicate where the information is available.

Sensory Aids Help in Developing Number Concepts

By RUTH H. TUTTLE
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Denver, Colorado

WHEN I introduce a number meaning to my first- and second-grade pupils, I plan for the experience to be as interesting to them as meeting a new friend.

Our impressions upon meeting a new friend are sensory. Our pleasure in such a meeting is enhanced by a cordial handclasp, a smile, an exchange of gracious acknowledgments, and perhaps, even the unconscious impression of a pleasing fragrance; all of which we may recall later in pleasant association with the new friend.

Impressions on meeting a new number meaning can be equally pleasing, and lasting, too, if the classroom teacher contrives to make them so. With very young children, sensory aids are an appealing way of presenting number meanings effectively.

Using classroom situations in which sensory aids are integral is now common practice in teaching arithmetic. Devising aids to supplement these is another common practice. The following paragraphs describe some of the sensory aids I have used this year in developing and fixing number concepts and processes with a first and a second grade sharing the same room.

Getting Our Bearings

When one is going somewhere, he has to "take off" from wherever he happens to be. We hoped this year to arrive at some simple arithmetical abstractions which we could gain thru concrete number experiences. But when the term began, where were we in number understanding as a group; and where were Johnnie and Mary and the other *individual* pupils? An answer required thoro appraisal of group and individual achievements.

Having both a first- and a second-grade group in my room called for a bit of maneuvering. To obliterate the barrier of *first* and *second* seemed to be the best starting place. This erasure was managed by obliterating the line in as many other activity areas as was possible; and by making *all* number activities and number centers so beguiling that pupil participation, regardless of grade line, was voluntary.

This freedom of participation gave some insights into the children's understanding of numbers. Each child was naturally attracted to the activities which he could understand and from which he could gain satisfaction. By observing their responses, I was able to get my bearings as to the attitudes and interests of the group in their approach to numbers, but this overview was hardly enough upon which to base a number program.

Establishing a Base Line

What was I looking for in this probing period? Certainly not for skill and speed in any of the basic processes, but for a clear picture of each child's ability to *recognize* and to *meet* the quantitative aspects of daily classroom situations. Some planned exploration was in order. One day the class needed to know whether all the children could play in the rhythm band at one time, using the instruments shared with the kindergarten. Our questions were: (a) How many instruments were there? (b) How many children needed instruments? This situation provided opportunities for the pupils to count children and instruments. From it we developed a charted record which called for organizing our findings and recalling previously experienced concepts such as groupings.

The chart showed us that 28 children could play at one time and told us how many instruments of each kind we had. It also served as a check sheet for insuring that all instruments were in the box when it was received from and returned to the kindergarten.

Specifically, the number activities experienced were:

1. Tactual counting for enumerating
2. Arranging groupings and counting groups
3. Discussing pairs as being two of a kind rather than just two things.

The participation in this project and similar ones gave me a chance to evaluate each child for his ability to make arithmetic function.

Taking Off

Having used the first weeks of school to discover just what arithmetic ideas and skills my pupils had and having discovered that most of them now seemed secure in the presence of numbers on the level of their experience, it seemed safe to launch a program for the systematic development of further concepts and skills.

Discovering groupings all around us was exciting. Interesting groups were a part of the room decoration. Groups in rhythmic patterns made us want to march, or skip, or hop, or fly; these rhythmic groups told us also how to play our instruments. Grouping books, crayons, or other objects according to size, color, or shape was fun.

Listening to number groupings was new and different: three buzz signals from the office called a messenger; eight buzz signals alerted us for civil defense; three two-buzz signals told us to "duck and cover"; four long buzz signals told us to go to the refuge area. These sensory aids made auditory counting meaningful and important. Imitating the "buzz" groups on the rhythm band triangle developed skill in listening and reproducing. And then we supplemented these natural sensory aids with contrived ones.

The felt family made its appearance in arithmetic class about the time the reading program introduced the study of the natural family group. Certainly, if the reading program could capitalize on the young child's interest in his family, so could the arithmetic program. Creative play with the felt family on a feltboard soon led the children to learn the meanings of *five*:

Five are in this family. They are all taking a walk. (5 and no more)
Two parents and three children are in this family. (2 and 3)
Three children go out to play. Mother and Daddy stay inside. (3 and 2)
Baby is asleep, and four people are watching television. (1 and 4)
Four older people live in this house. There is only one baby. (4 and 1)
The family went riding. No one was home. Then all five came home.
Now five people are home. (0 and 5)

Courtesy of Ruth Tuttle, Denver, Colorado

Jimmy is ready to record the number story on Betsy's felt-board. Betsy is asking someone to "read" it. All phases of early number concepts can be practiced with felt objects.

Later we grouped the felt children alone and discovered the meanings of 3. We grouped the felt parents alone and discovered the meanings of 2. We sent baby to grandmother's and discovered the meanings of 4. At first we interpreted our stories to the class orally. In time we began recording them on the chalkboard using "sign" language: $2 + 3 = 5$.

Full Speed Ahead

Now our set of 15 individual felt lapboards were brought out to help us right into further grouping. Soon all the pupils in the room were recording as well as manipulating and interpreting groupings. Beginning with any number of objects we (a) determined the *whole* or total number, (b) arranged that number of objects into two groups, (c) interpreted our arrangement, and (d) recorded our interpretation. These recorded interpretations are addition and subtraction combinations to you and to the second-graders. Further along the first-graders recognized them as such and used the terms.

Felt turkeys, frogs, snowmen, animals, trees, flowers, in sets of 10 each, created eager anticipation for the arithmetic period. Our 35 sets provided variety and kept interest alive. The lapboards were "loaded" and stacked in advance to accommodate the plans for the lesson of the day.

All phases of early number concepts can be presented and practiced with felt objects. Our felt objects were originally intended for grouping, but they are just as effective for counting (by 2's, 5's, 10's), for equal and unequal groupings, for parts of a whole, for place value, for adding, and for subtracting.

Considerations Here and There

The initial expense and the work of preparing the feltboards and objects may seem excessive. But the advantages are worth this time and money.

1. Feltboards have strong appeal which lasts.
2. They wear well (fifth year for mine) and are easily cleaned.
3. They are equally useful in the class circle for supervised work or at tables for unsupervised work (7″ by 9″ is a convenient size).

4. They are noiseless. (What a boon!)
5. They are easily stored.

Most second-graders required more than the 10 felt objects for their grouping activities. "Peg" boards made from scraps of sound-proofing material, with golf tees for pegs, met the children's manipulative needs. The tees cost a little more than other types of pegs, but they are more comfortably handled than any other pegs I have used, and they may be used more easily without the boards than other types.

Colored spools used singly or in strings up to 10 are attractive, handy, and effective sensory aids for developing concepts of counting and place value. The children string the spools themselves so they know from direct experience that 10 is the highest unit we string. This points up the 10-ness of our number system, especially when we use the strings of 10 in conjunction with our counting charts.

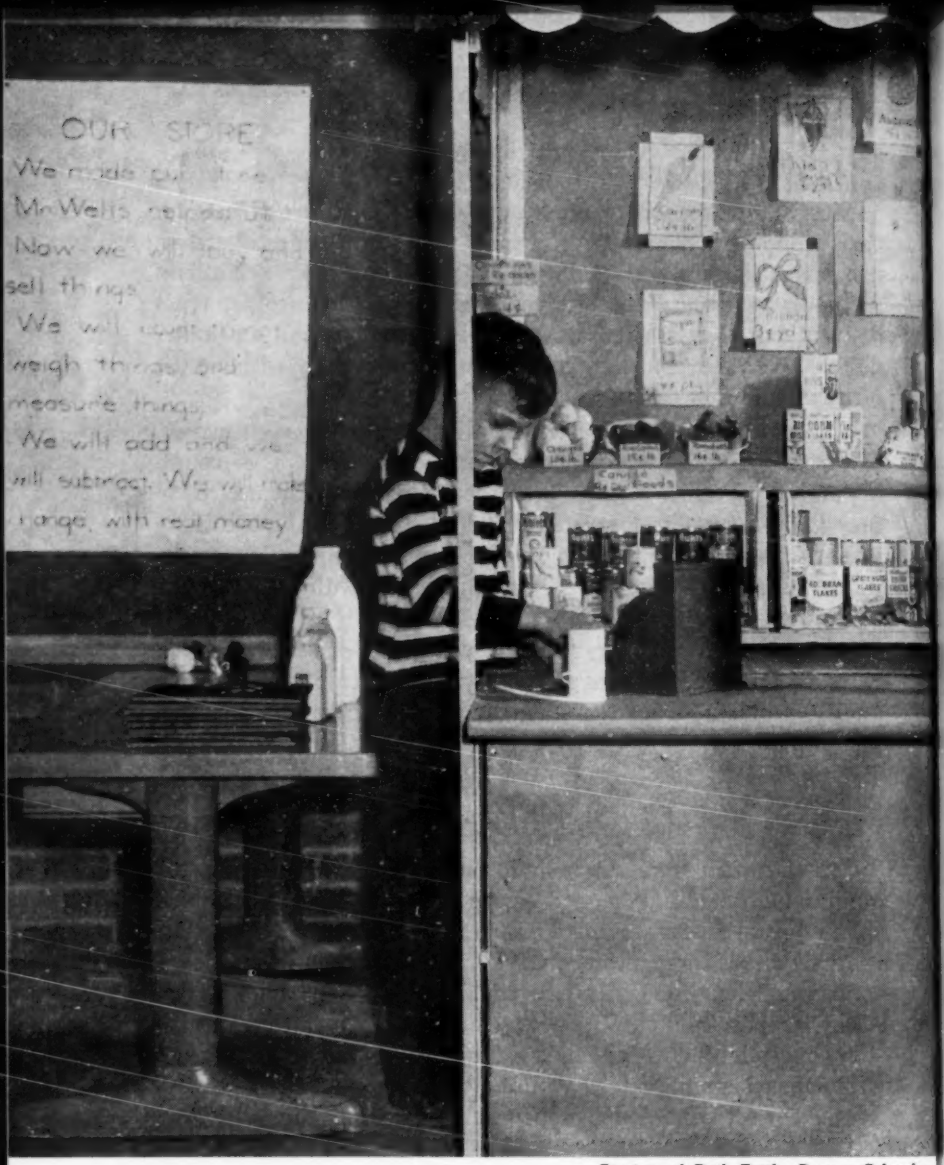
Of course, our grouping activities were interspersed with other types of number experiences: telling time, measuring, counting money, problem-solving, learning the equal parts of a whole, and such other activities required in classroom living.

To Market for Practice

Our classroom store was built to provide practice for fixing the number understandings gained during the year. Building the store engaged us in estimating materials and in measuring. Stocking the store required comparisons in size, weight, and appearance of various merchandise (gaily painted clay fruits, vegetables, eggs). Milk (tempera colored water) was measured into cartons ranging from one-half pint to one-half gallon in size. Then the cartons were labeled appropriately. Abbreviations for measurements and writing correct symbols for money were used in making price tags.

The pupils had to decide whether particular merchandise required measuring, weighing, or counting. Provisions for measuring were made—a yardstick fastened to the counter for linear measurements, scales, packaging by dozens and half dozens.

A good storekeeper, it was decided, is one who knows measurements, can make change, and can compute total amounts. A



Courtesy of Ruth Tuttle, Denver, Colorado

A good storekeeper is one who knows measurements, can make change, and can compute total amounts. A good customer is one who, too, can measure and make change.

good customer is one who can estimate fairly accurately what he can buy for his money; that is, he, too, knows measurements, can make change, and can compute so he can protect himself against error. Both storekeeper and customer need to be alert.

Real coins are used in the store. The customer is provided with the amount of shopping money currently in use by his particular group, and with a lapboard loaded with coins for making change. As one customer shops, the other customers reproduce on their feltboards the entire transaction between the storekeeper and the customer. The cost of the purchases is shown by moving coins to the bottom of the board. The change the customer should receive is shown in coins at the top of the board.

Since each board is checked before the next customer may shop and since any discrepancy on the boards calls for a review of the entire transaction for error, the incentive for speed and accuracy in completing the transaction is strong.

Arriving at Some Arithmetical Abstractions

The store is one big accumulation of sensory aids. It is the most satisfactory way of bridging the gap between concrete and abstract number activity that I have ever used at these grade levels. At this writing we have five weeks more of school; yet our goal of arriving at some arithmetical abstractions via functional number activities is realized by all the children in the class at their respective expectancy levels. One group is making change for 30 cents now, another for 25 cents, and another for 15 cents.

Recently it was suggested to me that children might become very dependent upon sensory aids and thereby nullify any good the aids might have accomplished. That has not been my experience. Youngsters are impatient with anything that gets in their way. When the challenge is made to discard unnecessary aids, the children are quick to see the advantage of independent thinking.

Adventure in Arithmetic

By ANDREW F. SCHOTT
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Milwaukee Arithmetic Teaching Project
Marquette University
Milwaukee, Wisconsin

IN 1940 Schlaugh[1] reported, "We may conclude that the use of calculating machines in the teaching of arithmetic is justified by its results, and that they should be used wherever the cost of installing such machines can be met." The Milwaukee Arithmetic Project carries the exploration of the use of adding machines and of the abacus much farther than Schlaugh did.

The Project officially began in December 1953, in seven Milwaukee area public and parochial schools. It was based upon pilot projects that began in 1951. These pilot projects were aimed at the improvement of the teaching and learning of arithmetic thru the use of aids; specifically, the Numberaid Abacus and the Instructor Adding Machine.[2] The pilot projects included only student teachers in their practice-teaching year and children in Grades I thru VIII.

The Two Tools

The Numberaid Abacus and its subsequent development, the Numberfun Counting Frame, are modern versions of the ancient calculating device, the abacus. This abacus was specifically designed to teach the construction and use of our number system and the arithmetic processes in accordance with current practices in the

[1] Schlaugh, W. S. "The Use of Calculating Machines in Teaching Arithmetic," *Mathematics Teacher* 33: 35-38; January 1940.

[2] The Burroughs Corporation of Detroit established a research grant for the Project in December 1953. In addition, the Burroughs Corporation provided the 390 adding machines needed to implement the program. A second research grant was made to continue the Project thru the 1954-55 school year. A third research grant was made and the Project was extended to six school systems in scattered areas of the country during the 1955-56 school year.

schools. Plastic counters that slide up and down on rods are in five brilliant colors. Each child works with one at his desk, and up in front the teacher instructs with a giant-size abacus, about two feet square.

The Instructor Adding Machine used in the Project is a standard seven-column, manually operated adding machine with tape. Methods are designed for the use of these two tools to fit into the customary curriculum of the schools. Textbooks are used as they are at present, except that the problems, whenever practicable, are worked on the machines. This does not mean, however, that pencil and paper work is neglected. The method is so designed that the conventional practices of pencil and paper teaching in the classroom are duplicated on the machine.

This approach was purposely used so that the classroom teacher and the student feel at home. The adding machine does not and cannot displace the mental processes. To begin with, its design and operation encourage a sound and clear understanding of basic arithmetic processes. Over and above that, it stimulates thinking by making it possible for the pupil to do more work. It is a mechanical device which, when used correctly, permits the pupil to explore much broader areas of arithmetic than were ever open to him with pencil and paper. Yet, pencil and paper arithmetic has by no means been disregarded in the Milwaukee program.

Working with the abacus and the adding machine, the beginner frequently writes numbers down just as he used to do. But now he does a great deal more than that. He grasps numbers with his fingers. He slides them along the counting rod. He groups them into solid quantities. And always before his eyes is the framework of our decimal system.

From the Pilot Project to the Present Project

The pilot projects showed that: (a) The Numberaid Abacus and the Instructor Adding Machine are valuable tools for teaching and learning arithmetic when used according to a well-designed method for their use. (b) The inservice education of teachers necessary for the use of the two machines in the classroom is of considerable value in the improvement of arithmetic teaching in the schools. (c) The learner, using the new tools according to the

methods designed for their use, achieves a better understanding of arithmetic and new skills, and finds arithmetic more interesting.

A fourth premise was obtained from research in a communications teaching aids program developed for the Wisconsin Telephone Company and the American Telephone and Telegraph Company of New York.[3] From this research the ways of introducing new tools and methods were known in enough detail to insure a measure of success in the achievement of the purposes for which the Arithmetic Project was developed.

The purposes to be achieved by the Project were:

1. The improvement of the teaching of arithmetic (This purpose concerned the inservice education of classroom teachers in the use of the new tools and the methods of teaching basic mathematics meaningfully.)

2. The improvement of the learning of arithmetic (This purpose concerned the introduction of the new tools into the classroom and teaching the pupils how to use them to gain a better understanding of arithmetic and arithmetic processes and the vocational applications of the machines.)

3. Further development of the methods designed to implement the use of the new tools in the classroom

4. The evaluation of the utility of the new tools and methods for their use in the teaching and learning of arithmetic. (This purpose included the use of standardized tests, as well as classroom teacher, pupil, supervisor, administrator, and parent evaluation.)

Work in the classrooms with the new tools began in the second semester of the 1953-54 school term and included pupils from Grades I thru IX. The pupils learned the technics of using the machines in addition, subtraction, multiplication, and division of whole numbers and decimals, and in problem-solving.

The regular work of the classes as prescribed by the curriculum was at no time neglected. The director of research was available to the schools at their request to talk over problems, to demonstrate technics, to work with administrators and supervisors, to furnish resources as needed, and to keep lines of communication open among schools, administrators, public, and teachers. At no time was this service involved in the evaluation of the teachers' work.

[3] Schott, Andrew F. "Communicating Teaching Aids Program of the Wisconsin Telephone Company and the American Telephone and Telegraph Company." A paper given at the 1956 Convention of the American Educational Research Association at Atlantic City, New Jersey.

Evaluation of the Project

Evaluations by teachers, parents, and children of their reactions to the new tools were recorded as the Project proceeded. Such evidence was gathered both formally and informally at teachers meetings, classroom discussions, and parent-teacher association meetings.

Pupil progress was regularly measured with standardized achievement tests administered at the beginning and end of semesters. The tests used were the appropriate level of the *California Arithmetic Test*.[4]

The Improvement of Arithmetic Teaching

All teachers, administrators, and supervisors who had direct contact with the experiment expressed their satisfaction with it. The teachers gained new insight into the mathematical concepts basic to arithmetic. They learned new teaching methods which they said would be valuable to them, whether they would use the machines and the abacus or not. Their interest in the teaching of arithmetic increased, and the subject became a more pleasant experience than it had been before the experiment began.

The elementary-school teachers learned that it was easy to teach the fundamental processes to first-, second-, and third-graders if the complexities of the processes were limited to the maturation potential of the students.

Teaching problems, such as zero as a place holder, carrying and borrowing, location of the decimal point, estimating, and the use of the adding machine for addition, subtraction, multiplication, and division, were really understood and presented with understanding. This improvement of the teaching of arithmetic was also reflected in the improvement of pupil achievement in arithmetic as measured by standardized tests.

The Improvement in Learning of Arithmetic

The improvement in learning of arithmetic can be measured by the improvement in attitude of the students toward the subject

[4] Tiegs, Ernest W., and Clark, Willis W. *California Arithmetic Test*. A revision of *Progressive Arithmetic Tests*. Los Angeles: California Test Bureau, 1950.

itself. Motivation in the learning of arithmetic did not diminish at any time during the course of the Project. The students, now in their third semester in the Project, are just as interested in the work and the use of the new tools as they were in the beginning.

Conclusive proof that the adding machine and abacus, used in accordance with the methods designed for their use, were valuable as tools of learning, was obtained in the testing program which was a part of the Project. Total scores are reported which include both arithmetic reasoning and arithmetic fundamentals. Pupils using the abacus in Grades I, II, and III gained an average of 17 months in the five-month period from February 1954 to June 1954, as measured by the *California Arithmetic Test*.[5]

A total of 924 pupils in Grades IV thru IX who used the adding machines and were instructed by the method for the machines were tested for their achievement. In four months' time the fourth-grade pupils gained 10 months on the average, fifth-graders gained seven months, sixth-graders gained nine months, seventh-graders gained 23 months, eighth-graders gained 25 months, and ninth-graders gained 22 months.[6]

Expansion of the Project

The Milwaukee Arithmetic Teaching Project will continue thru the 1955-56 school year. It is also being expanded to include five or six school systems outside the Milwaukee area. The value of the new tools in the improvement of the teaching and learning of arithmetic has been demonstrated beyond the preliminary stages. Arithmetic instruction in the schools needs to be brought up to date and kept in step with the times in which we live. An improved curriculum, in which the use of these new tools is integral, needs to be created. Much more work in arithmetic can be done in the elementary school than was previously thought possible.

[5] A breakdown of the scores for the reasoning and fundamentals sections of the *California Arithemetic Test* is available from the author. In general, reasoning scores are about a half year higher than scores on fundamentals at the time of the pretest, and this difference is maintained on the June 1954 tests.

[6] The results of the work thru June 1955, again using the *California Arithmetic Test* with new groups and with those who had participated the last semester of the previous school year, confirmed the earlier findings. The new groups showed the same gains, and the pupils with previous training maintained their gains.

Inexpensive and Salvage Materials as Art Mediums

By AGNES SAILER
Director
Burgundy Farm Country Day School
Alexandria, Virginia

THE fact that a variety of inexpensive materials can be used creatively in an art program is a fairly recent discovery in our school. We have had the basic clay, paint, crayons, and chalk for a long time and our children have used them rather freely; but, until recently, other types of materials had been looked upon with some suspicion as connoting "craft" rather than "art." We are learning that many types of materials can be used creatively; a group of our parents has shown us how.

Many Forms of Art

Art is a means of sensitizing us to seeing and feeling the world around us more keenly. Imagination should meet no boundaries in the use of materials of various textures and shapes. If one sees an eye when looking at a button, that is one's prerogative. As long as children are allowed to make their own discoveries, as long as the joy of doing—not the finished product—is kept uppermost, art can take many forms. That has been the discovery we have made.

Contributions of Parents

In our small, cooperative day school, having a full-time art teacher did not fall within the budget. Altho some of the teachers inspired the children to considerable activity, it was not until enterprising parents got together that things began to take shape. Mrs. Brown, who had had training and experience with art mediums, came to us with the suggestion that she start an art club.

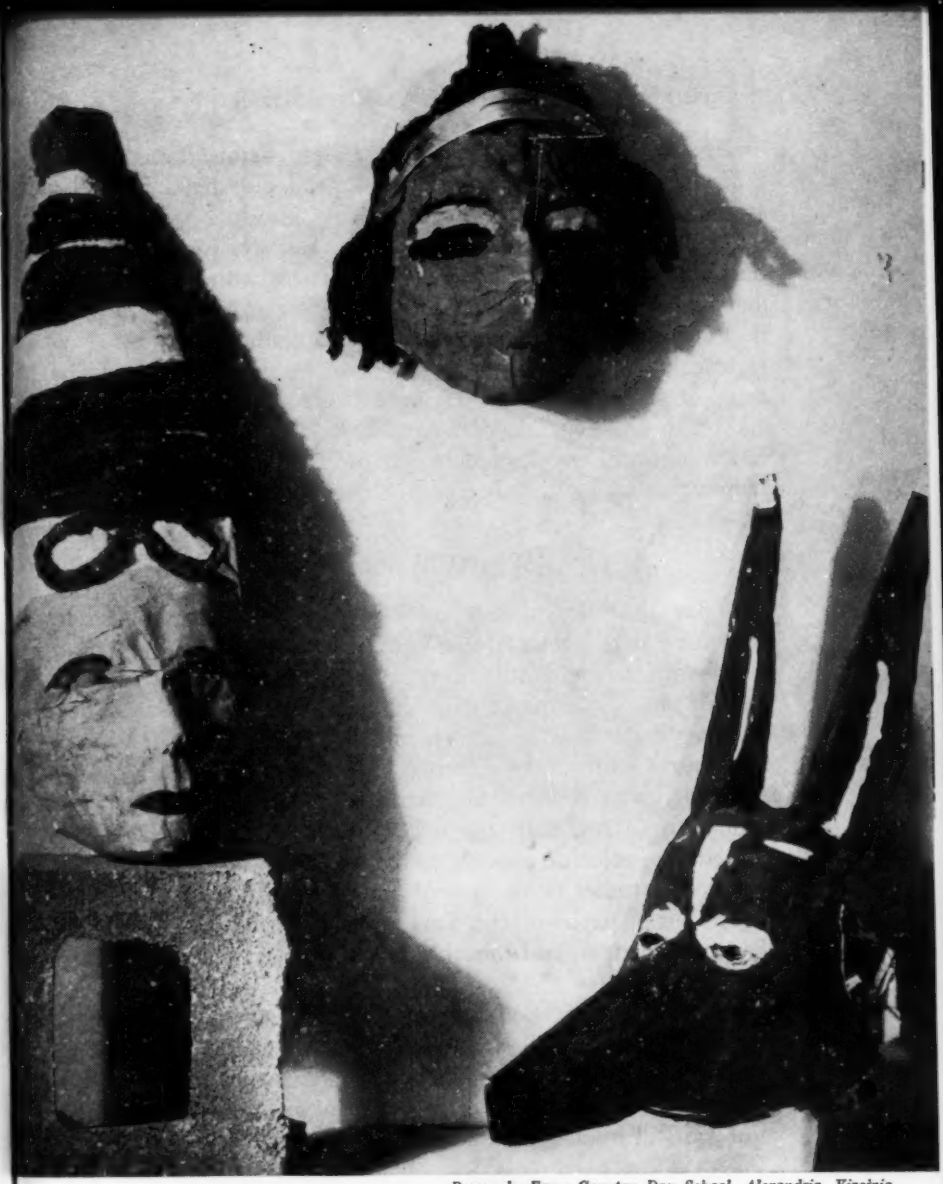
It proved to be so popular that she started more serious work with one group and pounced upon a spare room in the school for a studio. Next we organized an art department consisting of parents with talent and training who agreed to spend a day a week with us and others who were interested and willing to act as helpers. For the most part two parents were on hand each period and no more than 10 children were in the class at a time. Mrs. Brown acted as coordinator, inspirer, and trainer of the crew and did some teaching herself. Under this system some of the "helpers" gradually developed into "teachers"—persons with a real knack for setting up creative experiences for the children.

The third year of this art program is coming to a close, and we have just held an art workshop and open house in which our guests were invited to make things with us. The enthusiastic response we had from visiting teachers, children, and parents from other schools has made us more aware of the values we are achieving.

A Variety of Mediums

The raw materials consist of all sorts of odds and ends: ribbons, cardboard, empty boxes, yarn, fabric scraps, buttons, beads, wire, clothespins, raffia, noodles, egg crates, empty spools, old jewelry, chenille, toothpicks, pipe cleaners, sawdust, milk bottle caps, newspapers, straws, feathers, shells, and tissue paper. Such a list might well cause shudders of apprehension if one pictures teachers showing children how to make a variety of rather ugly and useless gadgets, but in the hands of people who are oriented to work with children creatively, these odds and ends can be a means of opening up all sorts of possibilities.

Assembling the material is an imaginative job in itself. It involves making contacts with printers, factories, and interior decorators to ask for their scrap materials. Mrs. Brown reports that she seldom comes from a grocery store without something that can be used—egg cartons, corrugated paper boxes for dioramas, or tins for holding clay. Feathers can be gathered up in a pet shop, sawdust at the woodworking shop, wire from a plumber or electrician, and huge pieces of cardboard from furniture stores. Broadside requests to all parents to bring odds and ends may result in some



Burgundy Farm Country Day School, Alexandria, Virginia

A play about Egypt may call for masks. After basic technics are demonstrated, the children put character into their face masks with yarn, feathers, bottle-cap eyes, and paint.

useless materials, but they can contribute usable items such as buttons, broken dishes, empty spools, and old sheets as well as scraps of yarn and cloth.

Having such a variety of materials necessitates careful organization. Our art room has innumerable shelves with cartons clearly marked. With about a dozen different people using the room, neatness and order of materials must be maintained.

Actually, we have come to feel that we would not trade our group of part-time art teachers for another arrangement for teaching art to children. No one person could ever think up such a variety of mediums for children to use. It is the stimulus these people give each other that keeps the program so exciting.

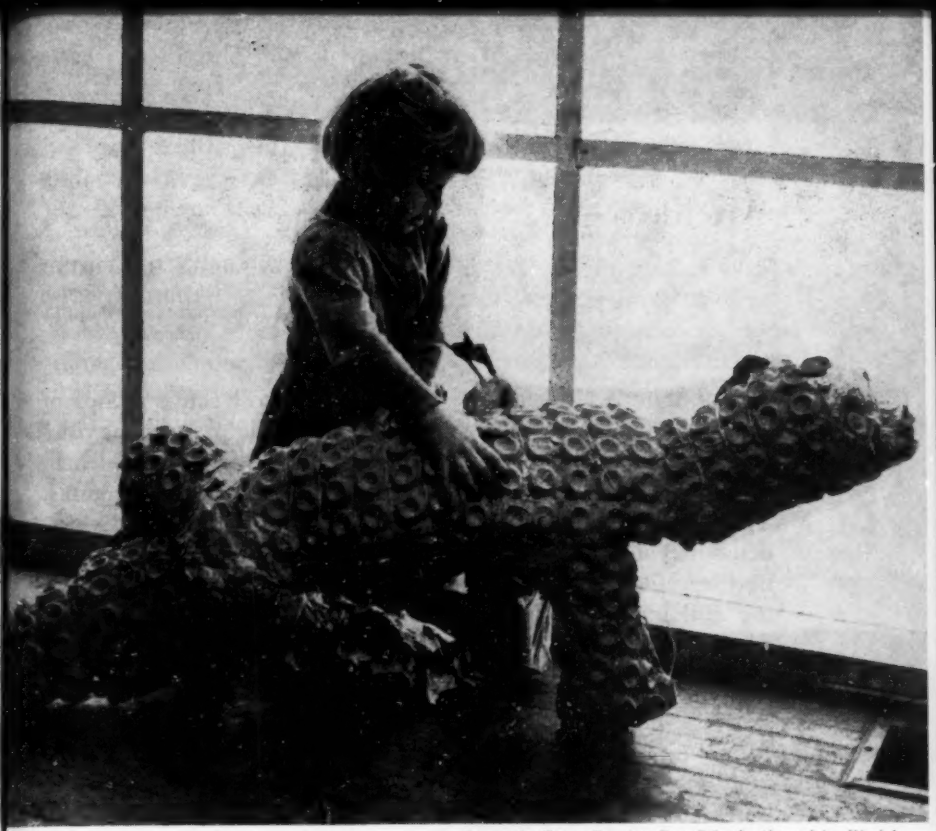
What Children Make

A play about Egypt may call for masks. After basic technics are demonstrated, the children put character into their face masks with yarn, feathers, bottle-cap eyes, and paint. A dinosaur is constructed out of newspaper with scales of egg-crate dividers. These same egg crates may be cut up into hats for clay cowboys or be made into Christmas tree decorations. Sawdust puppets are used for a play about Indians and Pilgrims. Pieces of hose are cut and made into snakes, with tongues and rattles added and designs painted on—colorful enough to be used for an Indian dance. Astronomy studies result in wild and wonderful men from Mars created out of papier-mâché. Large murals can be painted on rolls of wrapping paper, and movable props for plays painted on cardboard.

Not everything is tied to social studies. Newspaper animals, circus dioramas, mobiles, and collages are made just for fun. Christmas is a time for much experimentation with ornaments, cards, and wrappings. And, of course, clay, paint, chalk, and finger paint are still used singly and in combination.

Limitations and Values

We realize there are dangers in our approach. Parents are not equally skilled at working with children. Sometimes they yield to the temptation of making too many suggestions. There is a rather



Burgundy Farm Country Day School, Alexandria, Virginia

A dinosaur is constructed out of newspaper with scales of egg-crate dividers.

subtle line between the approach that says, "What can I make out of this material" and "What material can I use for the idea I have in mind." We emphasize the latter method, but it is easy to slip over into the former practice. Also, with such a variety and wealth of material it is quite possible to neglect the paint and clay work that can be so satisfying. All these dangers need watching.

The values, however, are substantial. Children are given opportunities to experiment with all sorts of materials that they can find in their own homes, thus developing in them interests that can and do carry over into their play at home. The object is to bring satisfying experiences to each child thru making him aware of his own creative powers.

Art Ideas

By LUCILE H. LATTING
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THE State Art Association is one of the most active groups of the Colorado Education Association. For the past several years it has sought to improve art teaching, largely thru showing teachers how to work with children in using a variety of art mediums. The chief means has been thru two-hour workshops in which demonstration and participation enable the teacher to take his new learnings back to the classroom. He uses the same materials the children use. After such a workshop, vivid color, creative decorations, and inspired crafts blossom in many a former drab classroom.

These workshops have been held in a majority of the 63 counties of Colorado. There have been many repeat performances. As an outgrowth of these workshops where the teachers often said, "We wish we could have some definite materials and ideas from other teachers for art growth and creativeness," the project of *Art Ideas*[1] developed.

From Idea to Project

In order to give these teachers more suggestions as a follow-thru from the art workshops, the State Art Association and the Colorado State Department of Education conceived the idea of arranging a portfolio of such materials. A list of topics for such idea sheets was reviewed with the Art Council members.

The plan was to have not more than four pages per issue with publication at two-month intervals. The pamphlets are printed by the State Department of Education and are distributed thru the

[1] This project was started in 1952 by Edith M. Henry, Supervisor of Art Education in the Denver Public Schools, who was president of the State Art Association. It has been continued thru the presidency of Ann Jones, Assistant Professor of Fine Arts, University of Colorado, Boulder, Colorado.

county superintendents. All Colorado teachers may receive them without cost. The portfolio enables the teacher to keep the suggestions at hand, and, when in doubt about a desirable technic, he almost surely may find the answer in one of the bulletins.

Art Ideas is intended especially for the classroom teacher who has had little or no special training in art. Its purpose is to offer suggestions and ideas for different types of art experiences, to stimulate experimentation with a wide variety of simple, inexpensive materials, and to encourage teachers to use their own ingenuity in working creatively with children. All issues have been geared to the elementary-school level and have been prepared by art teachers and supervisors, and by classroom teachers who themselves have developed some interesting phase of art with children. To date, 13 have been published, each in a different color, organized for ready use, and with an attractive format.

Resources, Holiday Art, Ceramics

The first pamphlet was an introductory one, listing the services of the State Art and National Art Associations; the resources found at art museums and the various colleges and universities; and the sources of supplies including commercial companies, recent publications, films, slides, color prints, and art curriculum materials.

Other bulletins developed such ideas as arranging the schoolroom and the bulletin board. For these purposes illustrations abound and one catches at a glance the good and bad points of arrangements.

How to make a book and design the pages and decorations is of value to the modern teacher because children love to make their own booklets in language and social studies activities.

Probably one of the most popular pamphlets is that on holiday art; suggestions for greeting cards, stencils, or sponge, spatter, or textile painting afford new interest. The illustrations and directions for making papier-mâché are intriguing.

Another on printing technics with a variety of inks in suggested colors encourages teachers and children to experiment with these mediums. Making posters and banks add new variety to old subjects. We never knew there could be so many clever ideas for piggy banks.

Ceramics are not only fun but can portray parts of the culture of peoples. The children can imagine that they are really cliff dwellers as they pinch the clay into shape in this age-old way of working, or they may be ancient and honorable Orientals as they make teacups for tea ceremonies.

On to Mobiles

By making mobiles the elementary-school children learn a little physics and geometry as they apply symmetrical and asymmetrical balance.

How does one support mobiles while they are under construction? One bulletin has the answer, and the schoolroom is much more livable and interesting with a string of mobiles of the pupils' own craftsmanship decorating it. Even superintendents become fascinated with such a project; one day the writer was delighted to find that the administrator had also participated in the art lesson, for some mobiles were dangling above his head in the school office.

The mobile problem may be introduced at any grade level from kindergarten to high school. Of course, the simpler methods of construction would be used at the lower grade levels. To keep mobiles exciting, do not become deeply involved in technic, but let the children have fun with them.

And Painting

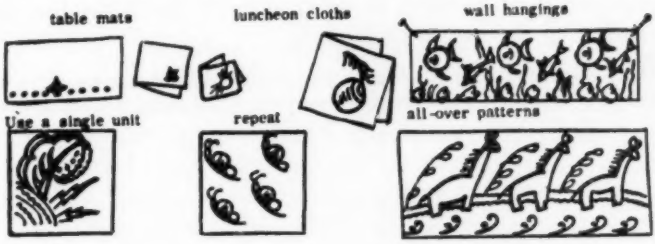
For the teacher who has difficulty with lettering there is an *Art Ideas* on "Lettering Made Easy." To stimulate painting in the elementary grades, Pamphlet No. 13 gives all sorts of ideas for painting with odds and ends—ideas for composition with finger painting, for using yarn with powder paint, or for working with a crayon resist.

The paint brush was popular with boys and girls even before the days of Tom Sawyer. Painting with a brush makes children feel good; it can be satisfying, creative, and spontaneous. Painting is an art to which children return again and again. It appeals to the minds of the very young children and to the more advanced students. What they paint is expressive of their environment and

POSTERS

PAPER SACKS
FOR MASKS

TRY THESE STENCIL SUGGESTIONS



communicates their thoughts. Many painting technics should be offered, for by having a wide choice, the thoughts of children are kept bold and free.

Art Ideas urges the teachers to keep the art activities alive thru constant change of approach. For experimentation one must not be afraid to use materials. Practical suggestions for painting are included, such as mixing the powder paints in milk cartons, paper cups, or soup cans, so that the receptacles may be thrown away when the paint becomes hard or spoiled. Children can keep their string, sponges, and odds and ends to use with paint in a grocery carton. Soon a fine collection of painting materials is available to the young artist.

Influence Spreads

The art teachers from the universities, from the supervisory staffs, and from the classrooms have gone about the wide expanse of Colorado with the aim of helping children to see, to create, and to express their feelings. Individuality is developed and encouraged. Thru the local forest ranger the children and the teacher in a country school in Routt County became interested in finding pieces of dry wood that resembled different animals or people. With a bit of imagination, even the youngest child soon had a decorative piece to take home. Results were amazing as the gnarled pieces became rabbits, chipmunks, or even a big bear.

Altho our *Art Ideas* portfolio was started in 1952 as a three-year project, the State Department of Education sincerely hopes that it will continue because art, like life itself, must progress. Each issue has been very popular among our teachers, and requests have also come from teachers in other states.[2] *Art Ideas* has proved to be one of our best teaching aids.

[2] Price of the folder for *Art Ideas* is 50¢. Individual sheets are 10¢. They can be secured from the State Department of Education, 127 Capitol, Denver 2, Colorado.

Reference Materials for Art Education

By HELENE CALLICOTTE CONDON
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New Jersey School for the Deaf
West Trenton, New Jersey

REFERENCE materials in the elementary school may be the main source of creative inspiration, but many schools do not supply such reference materials, other than an occasional magazine subscription. Therefore, the individual teacher must secure many resources on his own.

Good reference materials are collected with a purpose; they are not something taken out of a book or magazine the day they are to be used. The competent teacher keeps files of such materials which have proved invaluable to him. Of course, these files must be kept up to date as new and better materials become available.

Webster's New International Dictionary describes a reference book as "a book intended primarily for consultation rather than for consecutive reading." The definition for reference materials would follow along the same thought, and one might add: to study rather than to copy; to inspire further thought; to suggest new or further ideas; and, especially in art, to spark creativeness.

In analyzing these definitions and their application, we find two types of reference materials: those for the benefit of the teacher only, and those to be used with the pupils. At the elementary-school level there is practically none that can be used by the pupils alone.

Some Initial Suggestions

Where can such materials be obtained? Most of the large commercial companies today maintain an educational department that is at the service of the teacher and welcomes inquiries for materials. The Superintendent of Documents, U. S. Government Printing Office, Washington, D. C., publishes materials on every subject and twice a month issues a list of materials available.

In the field of art the materials manufacturers publish many helpful pamphlets and a few have demonstrators with whom inspiring workshops can be arranged for a group of elementary-school teachers. A few publishers have issued small inexpensive booklets on art education which are helpful to the teacher. Also, numerous films are available from companies, local museums, and art associations. Many popular magazines, such as *Life* and *Holiday*, furnish good photographs. *School Arts*[1] and *Junior Arts and Activities*[2] have especially good articles and illustrations on the elementary-school level.

For the teachers, these reference materials should offer inspiration in theories and concepts, technics, proper uses and care of materials, and methods of presenting the work to the class. The teachers' reference materials are not intended for the pupils, and, therefore, they are on a much higher level of conception.

Getting Down to Particulars

In the booklet, *Free and Inexpensive Reference Materials*,[3] are several good reference materials in art for the elementary-school classroom teacher, some of which are listed here.

Art Education

In art education we can recommend the *Art Educationist*[4] which is published bimonthly. *Children and Their Pictures*[5] by Gaitskell provides guidance in making the art teaching more meaningful for elementary grades. The Association for Childhood Edu-

[1] *School Arts*. Davis Press, Printers Building, Worcester 8, Massachusetts. Published September thru June; $5 a year.

[2] *Junior Arts and Activities*. Jones Publishing Co., 542 North Dearborn Street, Chicago, Illinois. Published September thru June; $5 a year.

[3] New Jersey Art Education Association, Committee on Free and Inexpensive Reference Materials (Helene C. Condon, chairman). *Free and Inexpensive Reference Materials*. Revised edition. Newark, N. J.: the Association, 1956. 29 p. (Available from Secretary, Eastern Arts Association, State Teachers College, Kutztown, Pa. 35¢.)

[4] *The Art Educationist*. Binney and Smith, 380 Madison Avenue, New York 17, New York. Published bimonthly; free.

[5] Gaitskell, Charles D. *Children and Their Pictures*. Fourth edition. Chicago: International Film Bureau (57 East Jackson Boulevard), 1955. 24 p. 75¢.

cation International has *Art for Children's Growing*[6] for ideas on learning how to help children expand their creative powers to the maximum. Topics covered are the value of the arts, developmental characteristics, climate for expression, encouraging experimentation, and evaluation of children's growth.

Two small booklets by the Gaitskells focus on specific groups of children. *Art Education in the Kindergarten*[7] aids in understanding the normal stages of development in art and in interpreting with considerable sensitivity and insight the various forms of expression which children adopt. Their *Art Education for Slow Learners*[8] describes the most efficient teaching methods and the modes of expression common to these children and also tells how they can profit from art.

How Children Can Be Creative[9] is yet another example of an art education reference. It shows how children can be creative in their daily experiences and points out major values of creative experiences for children.

Supplies and Facilities

Often the elementary-school teacher does not know how many and what kinds of supplies to order. Several references contain information that may help solve the problem. The title, *A Study of Basic Costs per Pupil for an Effective Art Program in Grades One to Six*,[10] of the first of these references adequately describes the contents. *Equipment and Supplies*[11] suggests lists of materials for nursery, kindergarten, primary, and intermediate classes. It

[6] Association for Childhood Education International. *Art for Children's Growing*. Washington, D. C.: the Association, 1955. 48 p. 75¢.

[7] Gaitskell, Charles D., and Gaitskell, Margaret R. *Art Education in the Kindergarten*. Peoria, Ill.: Charles A. Bennett Co., 1952. 40 p. $1.50.

[8] Gaitskell, Charles D., and Gaitskell, Margaret R. *Art Education for Slow Learners*. Peoria, Ill.: Charles A. Bennett Co., 1953. $1.75.

[9] Hill, Wilhelmina; Mackintosh, Helen K.; and Randall, Arne. *How Children Can Be Creative*. U. S. Department of Health, Education, and Welfare, Office of Education, Bulletin 1954, No. 12. Washington, D. C.: Superintendent of Documents, Government Printing Office, 1954. 23 p. 15¢.

[10] Foster, Elizabeth J. *A Study of Basic Costs per Pupil for an Effective Art Program in Grades One to Six*. New York: Related Arts Service (511 Fifth Avenue), 1953. 19 p. 2¢ stamp.

[11] Association for Childhood Education International. *Equipment and Supplies for Nursery, Kindergarten, Primary, and Intermediate Schools and Home Use*. Bulletin No. 39. Revised edition. Washington, D. C.: the Association, 1955. 92 p. $1.25.

also contains classified lists of tested and approved products by age levels and manufacturers and a bibliography. The final suggestion on supplies is *How Many, How Much?*,[12] a handbook of art education materials giving requirements for classes of various sizes.

For teachers in school systems planning new buildings, *Designing Elementary Classrooms*[13] provides an approach to the problems of classroom design in relation to the school child and program.

Some Assorted Helps

If you are concerned with exhibits, the booklet, *Exhibitions*,[14] has ideas on arrangements, purposes, and materials.

On technics and use of materials the classroom teacher will find the following very helpful: *Soap Carving in the Classroom*,[15] *Modeling with Permoplast and Amaco Clays*,[16] *The Art of Tempola-Craft*, and *Genie Handipaint*.[17]

For principals and supervisors as well as teachers, the booklet, *The Workshop as an Inservice Education Procedure*,[18] summarizes a study which was designed to ascertain the unique features of the workshop. It also discusses the strong and weak points of the workshop.

Reference Materials for Class Use

The reference materials the teacher uses with the class are usually on the illustrative side, such as reproductions, pictures

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[12] *How Many, How Much?* American Crayon Co, Sandusky, Ohio. 50¢.

[13] Taylor, James L., and others. *Designing Elementary Classrooms*. U. S. Department of Health, Education, and Welfare, Office of Education, Special Publication No. 1. Washington, D. C.: Superintendent of Documents, Government Printing Office, 1953. 55 p. 35¢.

[14] *Exhibitions*. State Teachers College, Kutztown, Pennsylvania. Single copy free.

[15] National Soap Sculpture Committee. *Soap Carving in the Classroom*. New York: the Committee (160 Fifth Avenue). 32 p. Single copy free.

[16] American Art Clay Co., 4717 West 16th St., Indianapolis 24, Indiana. 25¢.

[17] Binney and Smith, 380 Madison Avenue, New York 17, New York. Single copy free.

[18] Mitchell, James R. *The Workshop as an In-service Education Procedure*. Published by the North Central Association of Colleges and Secondary Schools. (Available from the Association treasurer, R. N. Snider, South Side High School, Fort Wayne, Indiana. 25¢.)

from magazines, and films of various types. These reference materials should be supplementary to the method and subject being taught. Too often one finds teachers depending entirely on one booklet or picture as the backbone for an entire lesson or project. Reference materials are not to be used as a "crutch" for the teacher, but rather as inspiration for the pupils to creativeness or suggestion of a method of using a material.

Four good one-reel color films are: *Art Points the Way*,[19] *Finger Painting Methods*,[20] *Why Young America Paints*,[21] and *Young America Paints*.[22] The Pan American World Airways,[23] and the Santa Fe Railway both have wonderful films which can be used for social studies and art, for the price of postage. Two good films from the Santa Fe on American Indian Art are *Arts and Crafts of the Southwest Indians*, which shows turquoise and silver jewelry, baskets, and pottery; and *Navajo Sandpainters*, which depicts the native healing ritual of sandpainting, preparation for painting, its execution and destruction.[24]

Other good sources of Indian materials are the Denver Art Museum[25] and the Provincial Museum of Natural History. The latter publishes an interesting booklet on the history of totem poles in the Pacific Northwest entitled *Thunderbird Park*.[26]

Marionettes always intrigue children. "Making and Staging Marionettes" [27] gives information for making and operating the marionette theater, and for making and dressing the actors.

[19] *Art Points the Way*. 16 mm, sound, color, 10 min. Association Films, 347 Madison Avenue, New York 17, New York. (Available also on free loan from Binney and Smith, 380 Madison Avenue, New York 17, New York.)

[20] *Finger Painting Methods*. 16 mm, sound, black and white, 8 min. Coronet Films, Coronet Building, Chicago 1, Illinois. (Available also on free loan from Binney and Smith, 380 Madison Avenue, New York 17, New York.)

[21] *Why Young America Paints*. 16 mm, sound, color. Binney and Smith, 380 Madison Avenue, New York 17, New York.

[22] *Young America Paints*. 16 mm, sound, color, 10 min. Association Films, 347 Madison Avenue, New York 17, New York. (Available also on free loan from Binney and Smith, 380 Madison Avenue, New York 17, New York.)

[23] 28-01 Bridge Plaza North, Long Island City, New York.

[24] *Arts and Crafts of the Southwest Indians* and *Navajo Sandpainters*. 16 mm, sound, color, 22 min. each. Santa Fe Railway, Film Bureau, 80 East Jackson Boulevard, Chicago 4, Illinois.

[25] Denver Art Museum (Department of Indian Art), Municipal Building, Civic Center, Denver 2, Colorado.

[26] *Thunderbird Park*. Provincial Museum of Natural History, Victoria, British Columbia. 25¢.

[27] "Making and Staging Marionettes." *Woman's Day* (The A & P Magazine), 19 West 44th Street, New York 36, New York. 25¢.

Reproductions of well-known paintings can be obtained from the local museum, the Metropolitan Museum of Art,[28] and from the Artext Prints.[29]

A great wealth of material is available on transportation and related subjects, such as the *History of Mail* (set of 16 pictures) and the *History of Planes* (set of 14 pictures), both in black and white plates, free from the United Air Lines.[30] Another good example is the set of seven charts on railroads.[31]

The Lending Service of the Brooklyn Museum Education Division [32] has wonderful materials too numerous to mention here. The museum will be happy to send a list of subjects available in slides and portfolios.

For the elementary-school class a charming little booklet, *Saint Nicholas in Holland*,[33] gives songs, photographs, and reproductions of children's illustrations.

From Here to Individual Collections

The foregoing are examples of the types of reference materials the elementary-school teacher should seek. There shall probably never be a complete list of these materials because the location of the school and the individual needs of both teacher and pupils vary too much to prescribe definite items. But classroom teachers can easily go on from here to develop their own resources.

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[28] Fifth Avenue and 82nd Street, New York, New York.

[29] Westport, Connecticut.

[30] United Air Lines, 80 East 42nd Street, New York 17, New York. Single copy free.

[31] Association of American Railroads, Public Relations Department, Transportation Building, Washington 6, D. C. Single set free.

[32] Eastern Parkway, Brooklyn 38, New York.

[33] *Saint Nicholas in Holland*. Netherlands Information Service, Eastern Division, 10 Rockefeller Plaza, New York 20, New York. Single copy free. (Titles of available booklets change from time to time.)

CHAPTER
FIVE

People and Field Trips as Resources

For some purposes the best instructional materials are found in the community. They are not produced specifically for schools but they are available to them. These groups of materials (resources) are persons, institutions, and nature.

Resource persons are the subject of two articles in the chapter. The articles name some of the considerations that go into using resource people. For example, the classroom teacher needs to choose the most appropriate time for the resource visitor to come to school, to plan with the resource person in advance, to plan with the children in advance, to use with the class the information that the resource person brings, and to have the children evaluate their own experiences as part of the whole activity. By following such suggestions resource people become part of the fabric of classroom instruction.

The second half of the chapter contains two articles on field trips. These articles suggest the same kind of careful thinking about taking field trips as the preceding articles do about using resource persons. Some of the usual destinations for field trips are places of historical interest, places of business and industry, and the headquarters of the regular community services. One author suggests that field trips are most valuable in enriching the program if they are planned, executed, and evaluated well.

Resources Are Where You Find Them

By ALMA M. FREELAND
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Department of Elementary Education
University of Texas
Austin, Texas

I DON'T know where to begin," I confided to my secretary, Jane Bliss, one morning in May after the usual early morning rush which every elementary-school principal sooner or later comes to accept as a part of the daily routine. "However, if I'm lucky and don't have a lot of unnecessary interruptions," I added, "the next two hours will see that pile of work on my desk reduced in size."

The problem of where to begin was solved as soon as I was seated for work. Propped up squarely in the middle of the desk was a manuscript in a bright red cover which Jane had put there with this memo: Clair Jenkins is anxious to have your comments on this report of the Resource Persons Committee as soon as possible. Committee wants to know if you can meet with them tomorrow. Printers are pushing them!

"A mere formality," I thought. "It won't take long to glance over this, attach my signature, and return it to Clair. I've worked along so closely with them I know the content of this bulletin; and as for editing, that is a simple matter when Clair Jenkins works on a report."

My plan to skim thru the neatly typed report was halted when I came to these words in the introduction: "This *Resource Persons Bulletin* was prepared to help teachers enrich classroom instruction thru the appropriate selection and use of resource persons from our school and community." Try as I might, I simply could not focus my attention beyond that point.

Occasions for Using Resource Persons

My mind kept wandering back to the series of occasions when we had found resource persons to fit so well into our classroom

program of activities. My memories brought a deep sense of gratitude to the dozens of parents, teachers, children, and lay people who had, thru the years, contributed their time, energy, and even love and devotion to help us provide a richer and more stimulating school experience for the children in our community. I was grateful to them for the warm, human touch which they had brought to each experience; and, tho I realized that we had made many errors and that we had not infrequently blundered in our selection and use of resource persons, I was not unmindful that this bulletin itself was actually our formal acknowledgement of the value of resource persons in classroom instruction. It also showed that we were conscious of the need for careful selection, timing, and planning for securing maximum benefits from the resource persons we would use in our program in the future.

Helping with Sewing

Who were some of these persons who had helped us? How and on what occasions had they fitted into the classroom instruction program? First of all there was Mrs. Denton! Actually, I would like to forget the circumstances under which Mrs. Denton came to help us were it not for the fact that the occasion marked the *beginning* of my realizing that parents can and want to contribute specifically as resource persons.

It had been a busy morning. The office was full of parents eager to enrol their children and hurry on with their business. The secretary, who had ushered them to the proper rooms as I completed each enrolment, whispered to me on a return trip that Miss King, one of the second-grade teachers, was "terribly upset" at receiving so many new pupils. So when Mrs. Denton and her seven-year-old daughter, Edna, arrived, instead of just directing them to Miss King's room I decided to go with them. I shall never forget the look which Margaret King directed at us as we stepped into the room nor the words with which she greeted us.

"But Miss Moore," she began, "I have 40 children already. Surely Mrs. Bowen can take *this* child! How can I with so many children get ready for that PTA program? All those costumes to

make, and . . . I'll never be able to do everything unless," she blurted out almost defiantly, "unless you can produce an assistant teacher."

Perhaps it was the look on our three faces that halted her. For suddenly she seemed to realize that the mother and young child had felt a slap of rejection, and she cast an appealing glance at me to help her. Somehow, my own embarrassment at the outburst made it difficult for me to look directly at the mother or child. Instead, my eyes traveled to their clean but beautifully mended clothes and an inspiration came.

"Mrs. Denton," I said hurriedly and eagerly, "you can sew, can't you? Would you be willing to help Miss King with the costumes for the play?"

"Why, yes, I would love to help you, Miss King," she said. Suddenly the frozen expression that had taken hold of Mrs. Denton's face melted away into a smile of warmth and understanding that was to become an inspiration to all of us thru the next two years that she was a patron in our school. Interestingly enough, Edna turned out to be "a terrific little reader," and the following year Miss King invited her to visit her room and read to the new second-grade group. Indeed, one of my own most cherished memories is that picture of Edna sitting primly in a rocking chair reading stories to eager-eyed little second-graders in Miss King's room. Edna had become a resource person, too!

Learning about Chicks

The news of how Mrs. Denton had helped Miss King spread to other teachers. And it was not long before they were looking around for help from other parents as well as persons in the school and community. Betty Dawson, another second-grade teacher who at first recoiled at her children's request to "grow" chickens found it a pleasant task when Katie, the custodian's wife, offered: "Miss Betty, I'll help you. I have some fine eggs and an old setting hen."

It was an exciting moment for Betty and her children when Katie's deft but gentle fingers helped the downy, fluffy little yellow chicks from the shells, all the while reassuring the anxious brown leghorn mother hen. And it was a proud Katie who showed

me the 40 carefully copied letters of thanks which she received from 40 grateful children for whom a rich experience had been possible because of the wisdom and skill of a simple, unlettered Negro woman.

Learning To Garden

Even now I like to remember the garden which Minta Thompson's children planted during their garden unit and which was made possible with the help which Chester, Katie's husband, gave them. And I remember the gala event when I ate lunch with the children and several mothers who had brought pans of cornbread and fried chicken and the equipment necessary for preparing the vegetables grown in the garden. As if by magic those tiny seeds of a few weeks ago were transformed into bowls of turnip greens flavored with bits of bacon. Crisp lettuce and radishes and delicate young onions became a delectable salad for our hungry young gardeners. When the young mothers had folded their aprons, they listened to the children evaluate their unit; and as I watched their faces and those of the children, I decided that report cards alone were poor instruments indeed for bringing about good relationships between home and school.

Learning about Oil

Then there was the discovery of oil, and our quiet, serene life gave way to a turbulent one. Suddenly the tall, majestic pines of East Texas were challenged by equally tall, but cold and impersonal derricks that pumped the crude oil from the earth. Bright red flares beckoned to people and promised untold riches and a life of ease for those who would follow the call. Our classroom walls were bulging in a vain attempt to hold not 40 but 50 or more youngsters each. The once quiet ivy-bedecked office of the principal became a madhouse as the roughnecks day after day rushed in at early dawn to enrol their children before they moved on to join the stream of humanity converging on fields that still showed the broad furrows of recent crops of cotton and corn. Everybody talked about oil, and the children were no exception.

Finally, in desperation, the teachers cried, "Why don't we get it out of their systems? Let's study about oil!" But there were no books; certainly none suitable for young children.

"Then, let's ask the parents to help." And that is how the big, husky roughnecks became a familiar sight in many classrooms. Heroes they were! Heroes whose exploits compared favorably with those of Paul Bunyan and Pecos Bill. Miniature derricks, chunks of soil, bottles of oil, pictures, and films were provided by parents and executives of the oil companies. Information and understanding came about as parents and school people worked together to satisfy this almost insatiable curiosity of children.

Learning about Roses

Gradually the flares dimmed, and, before we were aware of it, the soft rolling sandy hills were radiant with roses. We had become the rose-growing capital of the world, the highway signs announced. The chamber of commerce proclaimed an annual rose festival! All agreed that something would have to be done about the children's desire to study about roses.

"But where do we get material?" again the teachers cried. And again, parents and people from the community pitched in to help. The rose-growing experts from the nurseries helped the sixth-graders plan and plant our rose beds and explained how and why the sandy soil and other growth factors were so favorable for rose culture. A former student discovered a new rose in his field and realized enough from the sale of the patent to finance his college education. A new hero was at hand, and, of course, he too must come and help the children solve problems.

Other Resource Objects and People

Excitement ran high in a sixth grade when the father of one of the new boys offered to help a committee make a radio set and learn the Morse Code. One of the newly-arrived mothers was a writer and illustrator of children's books, and to her the teacher gave much credit for the unusual interest which the children in that room showed in good literature. They even began to want to write and illustrate stories of their own.

Gradually, the teachers began to realize that they themselves had much to offer as resource persons. When a list of their talents was compiled and made available, we were pleasantly surprised to find that we had, right under our own roof, resource persons who were able to discuss needs, problems, and questions relating to the custom of peoples in foreign countries; to demonstrate how to make soap and candles; to show the children how to weave and do dozens of other things. Teachers as well as parents and other lay people contributed a lot by sharing their hobby interests in stamp collecting, do-it-yourself activities, camping, drawing and painting, sewing, gardening, and the like.

An army camp located six miles from town, a factory that manufactured heaters, an airport, and other centers of activity brought new people with varied interests and achievements into the community and made us recognize that we had many new types of resource people on which to draw. There was no question in our minds that resource persons would fit directly or indirectly into almost every phase of our instructional program and at every age and grade level. But our years of experience in using resource persons had also revealed the need for us to establish a policy to help us profit more adequately from each experience.

From Experience to Policy

So a handbook was proposed and a committee was appointed to take the initiative in assembling pertinent information. A questionnaire was sent to all faculty members for answers to such questions as: In what instructional areas do you most need resource persons? What specific type of help do you think resource persons can give in these subject areas? What suggestions do you have on how we can survey our local community for resource persons? List the names and addresses of persons you know who can help us. What kind of contribution can each make?

The response was good, and the handbook contained information about literally dozens of people who had expressed a willingness to serve from time to time as resource persons. The list included parents, teachers, administrators, children, service personnel in the school, authors, farmers, gardeners, house builders,

musicians, nurserymen, travelers, old-time residents, firemen, city officials, librarians, servicemen and ex-servicemen, businessmen, and store clerks.

The committee felt that the selection, timing, and planning phases in the use of resource persons concerned everyone; hence their decision to include in the handbook a few simple guides for classroom teachers. A few of these suggestions are listed below to illustrate the nature of this aspect of the handbook:

1. Make a list of the specific kinds of help which children need.
2. Decide whether or not a resource person is the best way to secure the help that is needed.
3. Be sure to choose the most appropriate time for the visitor because "timing" is very important.
4. Choose the resource persons who can offer the richest contribution to the children of your age group.
5. Make plans with the resource person in advance. Give him information about the age and interests of the class; call attention to the need for the resource person to use appropriate vocabulary.
6. Direct the children in making plans for the visitor: introductions, behavior standards.
7. Make plans for recording the information: notes, tape recording.
8. Make a list of the questions which the children and the teacher will ask at appropriate times during the visit.
9. Plan ways to use the information which will be secured. Decide on use, such as oral and written expression thru reporting, dramatization, stories, pictures, murals, construction work.
10. Make plans for evaluating the experience and the use made of the information.
11. Make plans for showing appreciation to the visitor for the service he has rendered thru a letter of appreciation, or gift, or refreshments.

Finally, the Handbook Committee requested that each teacher be ready to make an over-all appraisal of the use of resource persons each year. An evaluation form was eventually worked out, and from the data collected thereby, we were able to make changes in the policies and procedures every year. As we have noted above, there were difficulties encountered from time to time; but, as a faculty, we felt that our classroom program was greatly enriched by the many people who shared information and services with us.

Resource Visitors in the Classroom

By KATHLEEN R. COMISKEY
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Andrew B. Cushman School
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EVERYONE likes variety in his daily menu. The very difference in food adds zest to meals. Why not try variety in the classroom menu?

No elementary-school teacher, regardless of background, can qualify as an expert in all the subjects he teaches. Therefore, he cannot always supply the illustrations and supplementary experiences which would add zest to his instruction. Travel, for example, is considered one of the best means for broadening background; yet, tho the average American travels far more today than a generation ago, relatively few teachers can afford to travel extensively.

Modern education advocates bringing the world into the classroom. One means for accomplishing this is the resource visitor. The teacher will discover that the resource visitor—a person not directly concerned with formal education—will stimulate and enrich the classroom program.

Who May Visit?

Who can the classroom teacher introduce as a resource visitor? Anyone who has some specific experience or knowledge which will illustrate or supplement the material of the daily curriculum. Of course, this person must also be free and willing to come to the classroom sometime during the school session. For example, the serviceman recently returned from Africa, the housewife interested in collecting leaves or shells, the local policeman, the fisherman, the dairyman—all have something to offer. The average person may at first hesitate to come because—thinking of the schoolroom as he knew it in his own childhood—he may not see how he can assist; however, properly approached and shown how

he can enlighten the class in some chosen sphere of interest, he usually will not refuse.

Preparing for the Visitor

In general, a resource visitor is asked to appear after a class has finished some study unit or activity. He may be considered the dessert topping the main course of the study unit. At other times, the resource visitor may be fundamental to certain aspects of the unit.

The pupils should know when the visitor is coming and what his subject will be. They should then attempt to become well acquainted with the subject. The room pupil-librarian should locate all available pertinent books, magazines, and pamphlets, placing them on the library table for general use. Thus, every class member may refer to them at will and some pupils may do research on particular phases of the subject. This method helps pupils to obtain reliable information because they will be securing facts from several different sources.

Research work on chosen phases is best suited to the middle and upper elementary-grade pupils. It may be accomplished by pupils working individually, working in groups, or working as a class on one subject.

Before the appointed visit all information gleaned should be shared by the pupils and they should discuss questions which they may wish to ask. On occasion the class may prepare a list of such questions and send them to the visitor, acquainting him with specific interests. For example, the following questions were listed by a class group expecting a visit from a meteorologist:

1. Is our weather changing?
2. How did you become interested in the weather?
3. How is hail formed?
4. Where do the hot and cold pressure zones begin?
5. What is the difference between a cyclone and a tornado?
6. How does a radiosonde work?
7. How often are radiosondes dispatched?

Resource visitors themselves often wish to know in advance the special interests of the pupils they are visiting. A meteorologist from the Massachusetts Institute of Technology who was to

speak to a group of sixth-grade pupils asked if he might first see the class's science text so that he would be able to talk in terms familiar and interesting to them. In another instance a Navy veteran, supplied with such advance information, spent considerable time acquainting himself with details of Mediterranean countries before showing his slides of those areas.

In order to facilitate the program, teacher and pupils should have everything in readiness when the resource guest arrives. A review of the rules of common courtesy prior to the speaker's arrival will assist in creating a congenial atmosphere for him.

Information from Different Visitors

On many occasions, we have experienced the benefits of resource visitors in our classroom and school. On one occasion a doctor whose daughter was a member of the class agreed to tell the pupils about his experiences. For approximately 30 minutes he told of interesting events he had encountered while working in China. Chinese habits and customs revealed by him fascinated the children. He followed his talk with rare movies he had made; not "tourist" movies, but shots of everyday happenings in the lives of average Chinese. As he showed the films, he carried on an interesting commentary. At his own suggestion a question period followed the film. The children evidenced a keen interest in their sincere attention and thoughtful questions. Their disappointment was obvious when the dismissal bell terminated this visit.

Learning about the Weather

Again, a visiting meteorologist instructed the class in many facts concerning the weather. All of us, including young people, are interested in the weather. Youngsters are familiar with the thermometer, and perhaps with the barometer and the rain gauge. But what of other, less familiar weather instruments? They became meaningful to our group when this weather expert spent the afternoon with us.

After he allowed us to examine the anemometer and then demonstrated its use to us, it was no longer just another mechanical device described in a textbook. We had read in the science book

that a radiosonde is equipped to record the atmospheric temperature as its balloon rises, but how much better we understood it when the speaker sketched it on the board and then opened an actual radiosonde box, removed the instruments, and let us examine them at close range. What could be a more impressive treat than helping to inflate a radiosonde balloon and to send it aloft with a piece of heavy paper attached signed by all members of the class? With luck, someone may find our balloon and send us a message. In any case, we will remember that demonstration and the other facts the meteorologist taught us in the one afternoon long after we have forgotten the statements in the science text.

Learning about the Scandinavian Countries

A housewife whose childhood had been spent in Norway and who had recently returned from a three-month trip to the Scandinavian countries proved to be an intriguing visitor. Tho she was attired in a native costume, she told us that these clothes are not worn daily. She pointed out that the Scandinavians dress much as we do except on special occasions. Since our school is in this country's coastal lowlands, we were especially interested in her discussion of the joys of mountain living. Her descriptions of the striking beauty of the Norwegian fiords thrilled us.

What about Scandinavian schools? Our speaker, a member of the parent-teacher association, compared our school system with that of Norway. Typically, our pupils decided in the end that they were glad to be in America because here the school hours are shorter. But they benefited in interest and experience from this resource visitor's vivid descriptions of Scandinavian countries and customs.

Seeing the World

A member of the United States Navy, who had been assigned to a cruiser making a goodwill tour of the Mediterranean Sea and the Indian Ocean, devoted an afternoon to revealing the wonders of these distant places to us. He showed beautiful colored slides and accompanied them with enlightening commentary. After we

viewed his pictures of native houses, luxuriant vegetation, rubber and rice plantations, and the elephant at work, we knew Ceylon as something more than a spot on the map. India with her snake charmers, jinrikishas, wide contrasts in homes, sacred cows, and wonderful houses of worship came to life on his screen. We will never forget the majestic Taj Mahal, for we were privileged to see close-ups of it; we understand now why it is often termed one of the wonders of the Asiatic world.

This serviceman was a keen observer. Did you know the Suez Canal has one-way traffic and is adjoined by a desert? His slides and commentary revealed these and many other interesting facts to us. Then there was Venice with its canals, the shops on the Rialto, gondolas large and small, and the cemetery reached only by boat. And the shot of the serviceman holding up the leaning tower of Pisa! We knew it was a trick shot, but we will remember the tower and what he told us about the churches being built in three separate buildings. And, since he mentioned Galileo, we have found out more about that famous scientist.

Resource visitors of this type afford the children opportunity to observe firsthand the customs, habits, and daily lives of peoples in regions far removed from the United States. They help promote understanding, and they familiarize the pupils with our government's efforts to establish goodwill and peace among the nations of the earth.

We have mentioned only a few resource visitors. Clearly, the list of possible ones is virtually endless.

The Resource Person—Instigator of a Worthwhile Letter-Writing Occasion

Letter writing is sometimes a chore for school children. Yet, as adults we realize how necessary it is for us to be able to write a sincere and interesting letter. We therefore teach proper letter forms and suggest ways for the pupil to make his letters interesting; however, if we fail to introduce a genuine purpose for writing social letters, the pupil will never learn to write any other than the stilted social letters which reflect his own boredom. But, when we ask pupils to write a thank-you letter to a resource person, they do not hesitate; they have something tangible to write about, as the following letter illustrates:

Dear Mr. Dixon:

I would like to thank you for showing us your slides of Europe, Asia, and Africa.

The scenes I like best were of Pompeii, Venice, India, and Ceylon. The ruins of Pompeii interested me very much because I read a story, *The Eruption of Mount Vesuvius.* Now I know what Pompeii looks like.

The leaning tower of Pisa interested me because I didn't know what the tower was built for or how much it tipped.

I hope that you have a nice trip when you leave for the Mediterranean. Perhaps you will come to show us some more pictures some time.

Yours truly,
Everett Benton

This genuine incentive is helping these children to write delightful letters.

Why Not Try Them?

Truly, resource persons enlarge the scope of instruction, stimulate interest in school subjects, make the curriculum more meaningful, provide opportunities for the development of social graces, develop methods of thought communication, and broaden the outlook of the students. Try resource visitors in your classroom and see! Once you have sampled their contribution, you will seek opportunities to use more of them.

Nine-Year-Old's Learn To Know Their Community

By MABEL PRIOR
Classroom Teacher
McKinley School
Youngstown, Ohio

What kind of community would you call Youngstown?
How old is our city?
Where do we get our water?
How many people live in our city?
What chance for recreation does our city give its people?
Does our city have any way of helping the poor or sick?
How many different kinds of jobs can a person get in our city?
Who runs our city?

These were just a few of the questions asked by our primary school third-year pupils as they used a reader which developed the community concept. Where could we look for the answers? Of course, the resources were all around us. All we had to do was make use of the community itself. Thus a project was born.

Organizing the Project

The class talked about areas of community life which we needed to know about. We listed the following on the chalkboard: history, government, city departments, education, religion, transportation, population, and area. Youngsters selected the areas in which they were most interested. They were cooperative about taking a second or third choice so that every area would be covered.

Two to four children served on each committee. Some of them subdivided their committees, each child accepting responsibility for a particular section such as one city department or one type of transportation.

Working Individually

One child made a trip to the Municipal Airport with his parents, outside school hours. He brought back an excellent report on the services supplied by the airport and the average weekly patronage of the services.

The child who found out about our freight and passenger train service got his information by phoning each of the railway stations.

The youngster who checked on cars called the American Automobile Association and used the classified pages of the telephone book to check on the number of auto-sales agencies, filling stations, used-car lots, auto-repair garages, and auto accessory shops.

Others found information at the library with the help of the children's librarian. Many made telephone calls to the best source of information. And parents helped in locating reading materials.

Whatever his means of finding information, each child first made a list of pertinent questions so that he could accomplish his mission without wasting the time of busy people.

Working in Groups

While the various individual searches were in progress, we were also working as a group.

Planning a model city—We decided to build a model city, incorporating the things important to community living. First we appointed a city planning commission. This group measured our available space and allotted areas for the business section, the residential area, and recreational area.

The class divided itself into three groups, each group taking one area and deciding what was essential for that part of a city. The youngsters shared the responsibility for making various model buildings.

For several weeks our room was scarcely visible thru cardboard boxes, papier-mâché and paint. Eventually, however, seeming confusion came to an orderly planned result.

After our buildings were created, we laid out streets and placed toy cars with signs on them. At first the temptation was to run cars on the wrong side of the street and over the sidewalks. It was great fun to crash them. This created a problem in our city and

caused us to consider the problems introduced in real cities with the invention of the automobile.

The children brought out the resulting need for new ordinances, larger law enforcement groups, and new streets with equipment for upkeep. We passed a few ordinances for our city and did a good job of keeping them.

One day as some of the children were playing with the city, they planned and executed an air-raid drill in which all the traffic was stopped. This is significant of the times perhaps, but more important was the evidence of responsible, cooperative citizenship without the initial prompting of a person in authority.

Taking excursions—Highlights in our project were class trips to the Ohio Bell Telephone Company, the board of education, the Institute for the Blind, and a television station. In each case, the staffs of these institutions had prepared for our visit and had worked out excellently guided tours scaled to the level of understanding of nine-year-olds.

The pupils had also been prepared and knew what they wished to see and learn at each place. The result was that they gained much information from each visit and our hosts were delighted and impressed with the children's alertness, interest, and behavior.

Using audio-visual aids—One might say that this whole project was an audio-visual one. However, we used some materials and equipment that came specifically from the Audio-Visual Department.

One of these items was a fine filmstrip on our community. We used it several times for reference and vocabulary development. We showed the film and read the script to our parents as a part of our culminating program.

We also projected movies and slides showing different types of communities. From these pictures, the children learned that geographic location influences the development of a community.

The teacher took three-dimension pictures of the group working at various group activities during the development of the project. At our culminating program, the pictures were projected as a surprise to both parents and pupils. They made quite a hit. Since that time the children have viewed them over and over in the stereoviewer.

Writing reports and lyrics—Our project was so interesting that we wanted to share it with others. As children brought in their reports, they read them and worked as a group to put them into good sentences with the help of their language books. Next they decided to have the reports mimeographed and made into booklets and also to put on a program of some sort.

At this time, our city schools' speech therapist was working with the children on a program of speech improvement. Since the children were reading choral speeches and enjoying them very much, the special teacher suggested that they try writing a choral speech about our community.

The class was enthusiastic. First the children outlined the areas they wanted to cover and then drew the facts from their reports. The teacher suggested the first few lines to establish a style and a rhythm. After that the children pitched in. At times it seemed chaotic, but somehow the children could agree upon the "right" thing when it was said.

After writing the speech, the children practiced reading it. The special teacher listened and helped. When the children felt that they could read the speech well, they invited their parents and friends to attend the program at which they presented the choral speech, which follows:

OUR CITY

ALL. John Young came here in 1797.
BOYS. He liked it here!
GIRLS. He stayed here!
ALL. Other people came.
BOYS. They liked it!
GIRLS. They stayed!
ALL. In 1802 Youngstown became a village.
GIRLS. It was named after . . . .
BOYS. John Young!
ALL. Steel mills were built. The village grew.
More people came. They worked together.
The village became a city.
GIRLS. People started to work to help our town.
BOYS. They worked at many different jobs.
GIRLS. Telephone operators, secretaries, beauticians . . . .
SOLO. What number, please?
SOLO. Mr. Jones is busy. Shall I have him call you later?
SOLO. Your appointment will be at 1 o'clock for a shampoo and set.

BOYS. Policemen, firemen, electricians . . . .
SOLO. Let me help you cross the street. (Siren in the background)
SOLO. Jump into the net!
SOLO. I think the trouble is in the generator.
GIRLS. Nurses, teachers, clerks . . . .
SOLO. I'm going to take your temperature now.
SOLO. It's time to go to gym.
SOLO. May I help you?
BOYS. Doctors, dentists, bankers . . . .
SOLO. Scalpel, please.
SOLO. Open wider, please.
SOLO. I'll get the money from the vault.
GIRLS. Librarians, technicians, housewives . . . .
SOLO. Here's a book you'd like.
SOLO. This will hurt a little.
SOLO. Will you help me cook dinner?
BOYS. Builders, steelworkers, engineers . . . .
SOLO. My dad is a carpenter.
SOLO. My dad works in the mill.
SOLO. My dad builds bridges.
GIRLS. Red Cross workers, Y workers, Community Fund workers . . . .
SOLO. Let's send relief to the flood area.
SOLO. Swimming classes today.
SOLO. Time for our fund drive.
BOYS. Railroaders, factory workers, park attendants . . . .
SOLO. Hi ball.
SOLO. There's the factory whistle. Time to get to work.
SOLO. Help me keep the park clean.
GIRLS. City department workers, water sanitation, streets, government . . . .
BOYS. People who sell to us, grocers, salesmen, druggists
GIRLS. Entertainers, theater operators, radio and television workers
BOYS. Ministers, lawyers, insurance men
GIRLS. Ice men, milkmen, mailmen
BOYS. Bus drivers, taxi drivers, airport workers . . . .
SOLO. Move to the rear, please.
SOLO. Where to, please?
SOLO. Flight 792 to Chicago—passengers may now board at Gate 6.
GIRLS. Press and radio reporters . . . .
SOLO. Will you pose for a picture, please?
SOLO. This is the 10 o'clock news—latest flashes.
BOYS. Gas station attendants, car repair men, truck drivers
GIRLS. Shoe repair men, dry cleaners, bakers . . . .
SOLO. How many loaves today?
BOYS. Air Force men, FBI men, office workers
ALL. All working for us. These and many others.

GIRLS. How do people get to their jobs?
BOYS. We have buses, cars, trackless trolleys, motor bikes
and bicycles, taxis, and our own feet . . . .
ALL. To get us around our city.
BOYS. Our city has good roads and sidewalks. We have men
to keep them in repair.
GIRLS. We sometimes leave Youngstown, but we like to come
back! Train, plane, bus, or car.
BOYS. Do people in Youngstown have a chance to learn?
GIRLS. Yes!
We have good schools, a college, a night school,
and a vocational school.
The people of Youngstown try to keep their schools up to date.
We also learn about our religion in our churches and temples.
ALL. We are learning about our city!
ALL. There are groups in our city that help us to be better citizens . . . .
Girls Scouts, Boy Scouts, YWCA, YMCA, Campfire Girls,
Community Chest, Red Cross, and other groups.
GIRLS. Do the people in our town ever have fun?
BOYS. Yes!
We have swimming pools and parks, theaters and
skating rinks, and playgrounds and libraries.
Sports: baseball, football, basketball, tennis,
golf, badminton, and bowling.
GIRLS. We can have fun seeing things!
BOYS. And doing things!
ALL. Youngstowners can play in the Youngstown Symphony!
Act at the Youngstown Playhouse! Sing in the
Community Chorus!
We can enjoy our Art Gallery and the natural museum
at our wonderful Mill Creek Park!
GIRLS. OOOh! See the pretty fireworks lighting up the sky!
BOYS. Those fireworks mean money for Youngstown: they're
from steel being made in the big furnaces.
GIRLS We like our city!
BOYS. We are proud of our city!
ALL. When people ask me, "Where do you live?"
I hold up my head and proudly say, "I live in
Youngstown, Ohio, U. S. A."

Others Who Helped

Many adults helped with our project. We have mentioned the assistance given our pupils by business and professional people who

gave every child a warm welcome. From this the children gained a realization that the adults of their community are vitally interested in their children and in their schools.

Parents—Parents, too, cooperated warm-heartedly. Each time we planned a trip, we had immediate offers of help. Parents helped supervise, transported props for and took part in our television appearance, and helped their children find resources and information. Some experiences were new, even to the parents. This project turned out to be educational for whole families, and such learning together may be a continuing interest for many.

The school staff—We have mentioned the role of our speech teacher. We also received aid from the audio-visual director, the school secretary, and the school dentist. Our coordinator of curriculum and supervision arranged for the children to display their model town at the board of education building. He also arranged a building tour for them which included a visit with the superintendent and the other staff members.

The school principal—A project of this type is impossible without the cooperation and help of the principal. He must believe in its value as a teaching method. He must understand the "creative mess" that sometimes occurs. Then there are certain details in planning trips outside the building for which he is solely responsible. Our principal helped to make our project possible.

A Few Answers, But Not All

We realize that this project could not have been as extensive with all groups of children nor does it solve all room problems. It can, however, be developed at many different levels to meet the needs and interests of specific groups. Our group needed and created work that ordinarily might not be assigned to third-year pupils.

GIRLS. How do people get to their jobs?
BOYS. We have buses, cars, trackless trolleys, motor bikes and bicycles, taxis, and our own feet . . . .
ALL. To get us around our city.
BOYS. Our city has good roads and sidewalks. We have men to keep them in repair.
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Enriching the Program thru Field Trips

By HARRY O. EISENBERG
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Rose Hill-Minquadale School District No. 47
New Castle, Delaware

THE value of well-planned field trips at all levels of education is too widely recognized to need justification. In this article, therefore, it is assumed that they make a significant contribution to the enrichment of the educational program, particularly at the elementary-school level. Our purpose is to help pupils secure the greatest possible benefit from field trips.

Survey of Community Resources

In every community there are many resources that can be used by the school to enrich its program. Frequently some of these resources are overlooked for their commonness. In order that they may not be neglected, we have surveyed these resources. In this way the vision of the more imaginative teachers becomes available to all teachers. Furthermore, the list can be adjusted and expanded as new resources are located. In our location we have not only the rich resources of our immediate environment but also those within a reasonable traveling distance.

As a first step in preparing the catalog, a list of the places of historical interest, the industrial companies, and the regular community services in the immediate area was prepared. This list was circulated among the teachers for examination and additions. The next step was to prepare similar lists for places within one-hour and two-hour travel time each way.

We next prepared cards on each of the places, listing the following basic information:

1. Name of the place or firm
2. Nature or type of contribution it could make
3. When this place was open for visits
4. The type of guide service available
5. The person to contact for arranging group visits
6. Advance information available to prepare for the trip.

When all the material was assembled, we divided the resources into four categories by travel time with trips for each of the Grades, I thru VI, in each of the classifications: (a) within walking distance, (b) within half-hour's travel, (c) within one-hour's or half-day's travel, and (d) within a day's trip.

Organization To Avoid Overlapping

Classroom teachers and the elementary-school principal must plan ahead in order to make this information functional and to avoid duplication. The list by grade level was an attempt to meet this need for organization. In addition, we used request slips to keep the administration informed and to check on possible duplication of trips for certain groups of pupils. We decided that each proposed trip must fit into the program and hold promise of making a definite contribution to the enrichment of the pupils' background of information.

Suggestions for Trips

Community schools depend upon field trips not only for the practical reason of the lack of published material but also for practice in using the observational and the interview methods for collecting data.

Before the tour is taken, the classroom teacher should request the guide to explain to the children what is to be seen and, at the end of the trip, to give an opportunity for the class to ask questions. The teacher may also advise the guide on the level of maturity of the children and suggest points of emphasis.

All activities in school proceed with greater smoothness and efficiency when the reasons for them are thoroly understood by all those participating. The activities are also more effective if the group develops rules to govern the procedures. In conducting field trips, therefore, we developed a set of regulations to serve as a guide for making advance preparations and for the actual trip.

So that a parent may know where his child is, every pupil going on a field trip must present to the teacher a written permission slip signed by his parent or guardian. These slips must be filed by the teacher in the office before the start of the trip.

Schools making extensive use of field trips should make a careful study of the legal responsibility of all those connected with excursions away from the school property. There are available several good discussions of court decisions affecting this phase of school operation which will help.[1] As a result of such a study, the increased awareness of the degree of responsibility will tend to provide for greater care.

When field trips are planned as a class project, all those who have the proper permission slip should be taken on the trip. Since many schools request the pupils to finance such trips, sometimes those who have not paid are left behind. Frequently those denied the trip are the pupils of limited experience beyond their own community who need the enrichment such a trip can give. Some arrangements should be made to defray such costs, perhaps thru a special fund. The manner of securing funds can be decided better in each locality within the policies of the schoolboard and community opinion. By failing to take all pupils on the trip, many of the benefits of preliminary planning and the evaluation after the trip are lost, particularly the contribution of each individual to interpreting and understanding the significance of the experience.

We also recommend using adult helpers. The number of such persons may vary, but one adult for every 8 or 10 pupils is satisfactory. Most parents are not only willing but eager to help. They want to help their children in a way that is acceptable to the school. Their eagerness is frequently increased by the new horizons opened to them which they never had a chance to know as school children. Furthermore, it gives parents an occasion to get to know the teacher and the other pupils with whom their child is constantly associated during the school year. An invitation to visit and work with the school when there is no problem that might have emotional impact gains friends.

In order to avoid overuse of field trips a policy should be established on the amount of time that can justifiably be allocated to

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[1] Garber, Lee O. "Legal Liabilities for Field Trips." *Nation's Schools* 56: 82-85; September 1955.

National Education Association, Research Division. *Who Is Liable for Pupil Injuries?* Revision of *Teacher Liability for Pupil Injuries*. Washington, D.C.: National Commission on Safety Education, 1950. p. 22.

Remmlein, Madaline Kinter. "Excursions Are Often Hazardous." *Nation's Schools* 27: 55-56; May 1941.

this phase of the curriculum. On the other hand, it is also important to stimulate proper use on the part of those who are inclined to oppose trips. The location of the school, the number of possible places to visit, the ability of the parents to finance such activities, the amount of interest in receiving visitors, as well as the curriculum of the school are among the considerations that make it advisable for each community to establish its own policy. The important fact, however, is that there be a democratically determined policy with which all personnel are fully acquainted.

Planning for a Trip

Some of the benefits of field trips are derived from the planning that occurs before the trip. These planning sessions are well motivated by the enthusiasm and interest of the pupils. Learning how to use the telephone and the proper etiquette for securing permission to visit a certain place are some of the benefits. Similarly, if the contact is made by correspondence, learning how to write a proper letter is necessary.

Courtesy extends to securing the consent of the parents to take the trip. No only do the parents need to know that a trip is being taken, but they also need to be acquainted with the reason for the trip, its potential contribution to an enriched educational opportunity for their child.

The pupil is the most important person in any field trip. Each pupil should assist in establishing the purpose for which the trip is made. When the pupils know why a trip is taken, they are more alert to the significance of the things they see and hear. They have a ready basis for associating and remembering information.

Since the field trip is to be a learning experience with an objective known to the pupils, the need for establishing conditions for achieving this goal becomes clearer and more effective. In this way the development of rules to cover procedure and conduct on the trip takes on real meaning. Sometimes mere recall of the controls necessary and re-emphasizing them is all that is required. When the rules are known and understood, most pupils want to conform. With proper planning, every trip can be made to serve purposes in addition to increasing the pupils' informational background.

Evaluation and Follow-Up

We allow a few days to elapse before centering a formal class discussion upon a field trip. Immediate reactions usually include many superficial, incidental occurrences that have nothing to do with the purpose of the trip.

From an educational standpoint, the evaluation and follow-up are most important. If the trip achieved its goals, the pupils should be aware of the fact and clearly see what was gained. If, on the other hand, the trip failed to meet the planned purposes, the reasons for the failure need to be determined. In this way failure can be avoided on future trips.

Early in the evaluation, appreciation should be expressed to the host for his courtesy. After the class has analyzed what was seen and heard on the trip, this information can be summarized by preparing a "thank you" letter. The preparation of this letter is a valuable contribution of the field trip to enriching the curriculum.

In the evaluation proper, certain major steps should be followed: (a) What was seen, heard, and experienced? (b) What new information was gained and what ideas the pupils had in advance were confirmed? (c) How does all the information fit into the program and how does it coincide with the advance plan for the trip?

The number of things seen depends largely upon the patient understanding attitude of the classroom teacher. This analysis session can readily develop into a merely repetitious period, or it can be a real opportunity for expression. Recognition of all contributions and a careful sorting of the ideas make the evaluation worthwhile.

By comparing the information assembled for this evaluation with the purpose set forth in the preliminary planning the pupil can see whether or not he has learned anything new. He can, likewise, see if ideas he had in advance of the visit are confirmed, found false, or expanded into more functional knowledge.

With two phases of the evaluation completed, the pupil is ready for the final step in the evaluation: determining the place this trip had in the program. From all this information, the pupil is able to recognize the contribution this particular field trip has made to enriching his educational program.

CHAPTER
SIX

Locally Produced Instructional Materials

THIS chapter, like the preceding one, is concerned with what may be termed local materials. In this chapter the articles are concerned with materials that are *produced* especially for the schools. As one article points out, the appropriateness of the materials to the locality is one of their special characteristics of value. As such they are a worthwhile supplement to the instructional resources of the school.

The Yearbook Committee does not expect unanimous agreement among the readers on all the ideas that are expressed. For example, there is some difference between theory and practice in the area of what the responsibility of the parent-teacher association is in providing instructional materials.

Some of the ways of producing materials require a larger budget than others and, as one article points out, there may not be economic justification for the job. But regardless of the cost, these materials do not compete with those produced for nationwide use.

The six articles in the chapter represent three fairly distinct types of materials: printed materials, films, and mounted cutouts. The articles also give clear descriptions of how the materials were developed. School staffs will want to adapt some of these processes to their own use.

How One School Produced a Textbook

By R. T. GRAU
Director of Curriculum and Instruction
Clinton, Iowa

IN THE spring of 1948 the Curriculum Council of the Clinton Public Schools decided that the seventh-grade social studies program should include a semester's work on the historical development of group living in the local community and of civic government. It was believed that such a unit of study would be effective in developing understanding of the principles of democracy and that it would help develop a sense of community pride and civic responsibility. This article is the story of how the materials of instruction needed for the unit were developed.

The director of curriculum, who was charged with the responsibility of planning the work, enlisted the cooperation of a junior high-school teacher of social studies—a master teacher who is also a scholar and thoro in all her work. These qualifications, together with the fact that she is a native of the city, gave her three important assets: (a) she understood junior high-school children, (b) she knew the local community well, and (c) she was thoroly familiar with the field of social studies. The importance of having a person with these qualifications for the initial work on a project of this type will become obvious. Together these two persons prepared a skeleton outline of the plan of instruction. The outline served as a guide for this teacher's work with the seventh-grade classes when the course was introduced experimentally in the fall of 1948. As the work progressed, revisions and additions to the outline were made. For the following year, the revised guide was used by the seventh-grade teachers of social studies in both of the city's junior high schools.

Available Material Unsuited

During this second year of work it became increasingly clear that the resource material which had been carefully listed in the

guide during the preceding year of experimental work was, in many instances, too difficult for seventh-grade pupils. Too much of the material had been written for ninth-grade pupils and for adults. Teachers agreed that they needed a textbook on local history and local government to do the job.

The publication of a textbook poses some rather onerous problems for the curriculum and instruction office of a school district, yet the need was compelling—no book was available. Pupil response to the topics outlined in the course had been excellent despite the frustrations which were encountered with the available resources. Parents were enthusiastic about the course because they witnessed the children's increased interest in community life and civic affairs.

Developing the Textbook

Out of the several methods for attacking such a problem, we chose that of making this a group project for teachers in which they could work with competent leadership. In June 1950, therefore, a three-week workshop was organized to attack the problem. Thirteen teachers who needed college credit were interested in the project and the cooperation of a university was enlisted for faculty supervision of the work, thus enabling these participants to earn three hours of college credit. Because the group was small, the tuition was insufficient to cover the costs to the university. Therefore, the local board of education subsidized the project to make up that difference.

The outline of the course, as used and revised by the teachers during the preceding two years, formed the basis for beginning the work in the workshop. Further refinements and additions, as suggested by the workshop leader, were incorporated. Existing material on the topics was reviewed and rewritten, and new information was gathered in the community by teams of teachers who visited the centers of government and community life. Then this new and rewritten information was organized into the sequential pattern of the outline. At the end of the workshop period, the Clinton Schools had a mimeographed edition of a student reference book or textbook on local history, government, and community life. This edition was used in all seventh-grade classes for two years. During that period teachers of the course met frequently to discuss

and make needed revisions and additions such as these: Pupil activities which had proved helpful were listed at the end of each unit, and names of local resource persons were added as they were discovered during the work. Pictures, sketches, charts, and graphs were collected to be incorporated into the final publication. Colored slides were made of points of interest in the community and appropriately listed in the material and placed in the visual-aids library.

These revisions and additions were edited into copy for the printers at the end of the year. In the fall of 1952 a 192-page student reference book or textbook, published by the local board of education, went into use. While it had taken a long time, a summer workshop and two years of trial, to produce a textbook, the reactions to its appearance were more immediate. Teachers and pupils were especially enthusiastic. The board of education adopted a policy that no copies would be for sale to citizens of the community because public demand threatened to deplete the supply.

An Appraisal of the Project

There certainly is no economic justification for producing text materials on the local level. Altho the immediate cost to the district, in this case, was confined to subsidizing the workshop and printing the books, the price per copy was considerably higher than books of similar size available from commercial publishers. However, if textbook materials are needed for units of study of the local community, the method described above is recommended. The work of a teacher group makes the search for materials more exhaustive, and the shared evaluation of materials under competent leadership produces better final copy. In addition, the professional growth and increased skill in community relationships, which accrue to the participants, are a significant dividend which cannot be overlooked.

Producing the Story of Local Pioneer Days

By MARY C. WILSON
Supervisor of Instruction
Lincoln Parish Schools
Ruston, Louisiana

EACH year increasing numbers of books for juveniles pour from the presses. Certainly it would seem that they would provide adequately for every child and every classroom need. Yet teachers and principals find that they do not. Therefore, when there is urgent need for material that is not available on the market, classroom teachers must do without the material or produce it themselves.

The Need for Material

The need for authentic material on pioneer days in Lincoln Parish was pointed out at a curriculum-planning meeting of primary-grade teachers. The study of pioneer communities is especially appropriate for third-grade pupils because most of them are ready to study about the extended community: who the first settlers were, where they came from, why they left their old homes, and how they worked together to establish a new community. Altho reading material for children on pioneer life in general is abundant, no book for children contains information about the physical setting, the historical incidents, and the folklore of this particular parish in northern Louisiana.

The primary-grade teachers wanted material containing authentic, interesting stories about the pioneer communities in Lincoln Parish. These teachers, therefore urged the supervisor of instruction to explore the possibilities for producing a booklet that would be suitable for use in their classes.[1]

[1] In Louisiana all schools, rural and urban, are organized on the parish (county) plan. There is one superintendent and one schoolboard for all the schools in the parish. Similarly the supervisor of instruction works closely with the principals and teachers in all the schools in the parish.

Plans for Producing the Material

The teachers in the parish were told about the need for material that third-grade children could read. At the same time an invitation was extended to teachers to work on the development of such a booklet. A parishwide committee of 12 teachers[2] volunteered to work on the problem. Because there were representatives from each of the major communities in the parish, widespread interest and familiarity with the various communities were assured. Since the members of this production committee were volunteers, they were especially enthusiastic about the work.

At the first meeting of the committee a chairman was chosen to guide the work, to assist in calling necessary meetings, to keep various members informed of the progress, and to keep the work moving. Two meetings were devoted to open discussion and overall planning. Among problems discussed were the following: (a) the unique features of Lincoln Parish, (b) sources of authentic information, (c) what stories should be contained in the booklet, (d) who would be responsible for writing the various stories, (e) the form to be used in writing the stories, (f) the form of the booklet to be produced, and (g) the length of time necessary for the research and work.

In their planning, these teachers agreed upon certain policies and goals to guide them in their work. They wished to produce a booklet which would help advanced primary-grade children to gain depth of understanding about community life, especially in Lincoln Parish. Thru the stories of pioneers who lived in this area the teachers wanted to assist children in learning how the early people worked together to build the communities and the institutions. These stories had to be authentic and so far as possible be expressed in simple language. While no formula for vocabulary control was to be used, the production committee members agreed to check difficult words with the vocabulary of a basic third-grade reading textbook.

[2] Laura Mae McCullin, Chairman, Eastland School; M. J. Barr, Hico School; Eva Best, Simsboro School; Laurice Capps, Choudrant School; Flora G. Colvin, Dubach School; Willie Colvin, Dubach School; Mary T. Durrett, Simsboro School; Irene S. Hardy, Hillcrest School; Lizzie V. Riser, Hillcrest School; Ida C. Shealy, Eastland School; Nettie M. Warren, Dubach School; Mary C. Wilson, Supervisor of Instruction, Lincoln Parish Schools.

Unique Features of Lincoln Parish

Each locality has unique features which influence its settlement and its development. The committee, therefore, planned to portray the distinctive features of Lincoln Parish pioneer days in its booklet. Lincoln Parish is in northern Louisiana between the Ouachita and the Red Rivers. Since this parish has comparatively poor soil and is some distance from a river, its settlement came late. The population of the parish has always been sparse and is chiefly rural. The parish itself was not formed until after the Civil War altho a few pioneer communities had been established before the war. All the communities in the parish, then, would be considered relatively young. Ruston, the parish seat, sprang up as a result of the railroad that was not built until 1883.

The committee planned to begin the booklet with a look at the physical setting. A story about the Indians who roamed this region would help the children to understand the landscape and the natural resources of the region. A story of the first settler in the parish would tell why he was attracted to this region. Since it would not be feasible to include stories about each of the numerous subcommunities, it was decided to limit the stories to each of the major communities of Lincoln Parish—one story about the pioneer days of each community in which a consolidated school is located.

Sources of Information

Since most of the teachers on the committee are descendants of pioneers or long-time residents in Lincoln Parish, they were very enthusiastic and interested. They knew most of the stories which had been told to them by their parents. But there was still the problem of how and where to obtain *accurate* information.

Committee members agreed to contact long-time residents who could supply "authentic" bits of information and interesting anecdotes about the early days in Lincoln Parish. We still have old people who can remember the pioneer days. Other citizens had heard stories from their parents and grandparents. While it is dangerous to use the personal recollections and information that are handed down thru the spoken word, these stories are too precious to overlook as they comprise the essence of local folklore.

Few written records of Lincoln Parish were available, and only brief accounts of this region could be found in a few general books on Louisiana. In the early 1940's a local librarian had written a pamphlet for adults. Copies of two anniversary newspapers devoted to the history and progress of the parish were available. Clippings of historical incidents from local newspapers had been kept by some members of the committee and other citizens. Access to a few papers accumulated by interested citizens or civic organizations could also be arranged.

The value of using various source materials was not overlooked. Old letters, pictures, newspapers, and diaries were read. Minutes of civic organizations and church records were consulted. Family cemeteries were visited to obtain dates. Records in the parish clerk's office revealed authentic and fascinating data on property transactions.

Trial Use of the Temporary Form

At the close of the school year a final meeting of the production committee was held. At this meeting each member presented the material he had prepared to the chairman. Further planning resulted in the decision to ask a local high-school student with unusual artistic ability to read the entire manuscript and to make appropriate illustrations.

During the summer vacation period the committee chairman and the supervisor edited the teachers' stories, endeavoring to make the language as simple as possible. After the stories were edited a local authority was asked to read them critically and to make suggestions for their improvement.

Finally stencils were cut in the central schoolboard office for the 68 pages. When these pages were assembled and fastened with a heavy-duty stapler, the result was an attractive and impressive booklet. In September copies of the booklet were distributed to all elementary schools in the parish. Teachers were asked to use the booklets in whatever way they desired. They were also invited to make constructive suggestions for improvement since the booklet is to be used in mimeographed form for two or three years and revised before being printed.

This period of trial use of the mimeographed booklets is an important step in the development of the story of Lincoln Parish. A master copy is being kept in which a record is made of suggestions for improvement. Unnecessary vocabulary difficulties and complex sentences are being simplified. Factual errors are being corrected. Uninteresting and irrelevant materials are being deleted. Revealing material and vivid details are being added.

One eighth-grade class conceived the idea of collecting additional interesting anecdotes from their families and communities. This idea has given these pupils the opportunity to interview old-timers and to consult primary sources of material. The incentive to express themselves accurately and interestingly has been paramount. The best stories will be submitted to the production committee for consideration in making the permanent printed copy.

Uses and Values of the Material

After two years of work there is only a mimeographed booklet which has been given trial use for one school session. Teachers recognize the imperfections and weaknesses of this booklet but are aware of the fact that it has served many children as an important reference on pioneer life in this area. While the booklet was developed chiefly for the use of third-grade pupils, it has also proved useful in the study of Louisiana history in eighth-grade classes. We have not tried to provide each child of a class with a copy, but rather have used the booklets for reference reading, for small-group study, and with individual pupils who desire information on a particular topic. Only one chapter may be used in one class whereas certain pupils in another class may use the whole booklet.

Teachers thruout the parish agree that this booklet has helped many children to gain deeper appreciation and wider knowledge of their local heritage. Important suggestions for improvement indicate that this mimeographed booklet will result in a serviceable printed record for young and old pupils to use in learning about the pioneer days in their locality.

Parents Helped Us Develop Materials

By ELIZABETH V. BANKS
Supervising Principal
Roger Sherman School
Fairfield, Connecticut

WE WERE having a paper drive, a continuation of our practice of the war years. Interest was especially high for this particular drive when one mother called to ask if we would like to have the first 10 years of *Life* magazine, complete, to add to the paper drive. The family had kept each issue, but the pile was getting too large. We accepted the magazines.

The School Setting

Timothy Dwight School,[1] one of the 13 elementary schools in Fairfield, is located on Greenfield Hill, which is just three miles north of the Boston Post Road and in one of the more picturesque residential sections of the town. At the present time there are about 200 children in the school, coming from homes of various circumstances but with the majority of them having far greater advantages and opportunities than the average American youngster. There is an excellent community spirit among the residents of the Hill, many of whom are business and professional men of Bridgeport, New Haven, and New York.

A Real Need

This same spirit of friendliness and goodwill has enveloped Timothy Dwight School and makes itself felt in each classroom. But even so, materials from libraries are hard to get. The nearest public library is three miles away, and the nearest library which

[1] Three years ago, the author left the Timothy Dwight School to become principal of the Roger Sherman School. The project reported in this article centers completely around the Timothy Dwight School.

has a picture file is eight miles away in another city, with services limited to residents.

For a long time we had dreamed of starting a central file of materials, and the enormous pile of *Life* magazines seemed to pave the way. If we could get the idea rolling, it would grow.

So we set out on our project. We called two mothers who had been teachers until fairly recently, and asked them to come in and discuss the whole plan. While both mothers thought the idea was fine, only one of the two said that she would be able to come to school at regular intervals to start going thru the stack of magazines. The other mother said she would like to work at home.

Organizing for Work

These offers of cooperation gave us the beginning of two working groups. The mother who wanted to work at school started thinking immediately of six or eight other women who would be available to come to school to clip material. The mother who wanted to work at home thought about several of her neighbors to whom she could give materials to be readied for mounting.

The work continued the remainder of that year. One group met at school every Wednesday morning to tear out and trim, and the home group worked individually as they found a few minutes. There was always material at school ready to be cut out in the event a mother came in early for Johnny or Susie or just had a few spare minutes and wanted to do something for us. As time went on, other mothers joined both groups and some had to discontinue their membership, but the two originals held to their posts and always kept the group around them busy.

Problems of Filing

As the materials came to the chairmen from the larger groups of mothers, they were grouped under very general subject headings such as holidays, World War II, science, and art.

When sufficient materials were ready, we held a teachers meeting to begin the task of filing in large envelopes under ready-reference headings. This step was a real goal achieved, for at last we were moving in the right direction.

Courtesy of Elizabeth V. Banks, Fairfield, Connecticut

Is there a folder on the ostrich?

But as yet we had no filing case, and, since the teachers had worked with the materials, they were ready for them in their classrooms. A boot box in the upper hall was the right width and depth but had no dividers. One of the fathers, who was adept at woodworking, came to our rescue by nailing some beaver board strips to the floor of the box.

The mothers continued their work the next year and, of course, had long since completed the past issues of *Life* magazine and were working on other magazines which had been contributed for the central file. Word had spread in the community; grandparents, neighbors, and friends were sending anything they could find.

By the end of that year we had outgrown the boot box and needed something larger. Another father offered to make a long box with dividers and put it on rollers. With this box it would be possible not only to keep things in order, but also to roll the entire file right into the classroom. There, the children who were

on a committee preparing a report on the rivers of Connecticut could take out the folder on New England, while a committee that was working on the wild life of the desert would have immediate access to the folder on Insects and Animals of the Desert. It was a real joy to see the youngsters using these materials and to hear the teachers arranging a schedule cooperatively.

Adding Collector Pieces

On another call to parents for materials, knickknacks began to arrive. There was a mask from Bali, a gum fossil from New Zealand, a Phoenician pin from Tunis, a set of figurines from India, a miniature replica of a mummy in a case, a replica of Edison's first incandescent lamp, one of the little bells which mark the route of El Camino Real, a display of cones from several species of conifers, and some real flax. We used these in the classrooms, displayed them in the hall in a little glass-enclosed case, and finally added another case as the collection grew. These exhibits were changed at intervals.

Expansion and Refinement

As time went on, the file box too was getting overcrowded, so the parents purchased a large filing case complete with folders.

This purchase again meant additional work for the parents because the materials had to be transferred. Also, at this point, the group of parents and teachers decided that some of the items could be preserved better if they were mounted permanently. This problem was solved when one father, who was in the pulp and paper business, was able to get us some fine mountings at low cost.

Only the Beginning

Since the work on a project such as this one is never finished, the central file committee has become a standing committee of the PTA. We also have a regular teachers committee set up each year to work along on it. Even with five to six years of hard work by parents and teachers, the surface of the possible contributions of the project to classroom instruction has only been scratched.

Producing Motion Pictures and Slides

By HAROLD GRAVES
Principal
D. McRae School
Fort Worth, Texas

LIKE others, we in D. McRae School have recognized the value of motion pictures, slides, and other visual aids in teaching children more effectively. Despite the fact that many excellent commercially produced films and slides are on the market, in some areas we needed materials based on our particular needs. Local needs and conditions change from time to time, and visual materials should be adapted to these changes. We decided, therefore, to make our own materials.

Variety of Films Now on Hand

So far, we have made an 8 mm motion picture, *Bicycle Safety*; two 16 mm films, *Safety Through the Day* and *How To Be a Good Patrol Boy*; slides on the worst safety hazards around our school; and several 16 mm films on relay technics, as well as pictures of our teams in action at the citywide relay meet each year. In trying to improve the appearance of our bulletin boards, we have made slides of bulletin boards in the classrooms and used them in faculty meetings for discussion and criticism. All these films have been in color.

In the near future we hope to complete photographing, in color, the historic sites and places of special interest around the city of Fort Worth. These slides will be used in teaching a social science unit on Fort Worth. Another future project is color slides of soil erosion in our community for a science unit on soil.

Aids and Procedures for Producing Films

We have made these films with simple equipment which was on hand and we had to buy only the film. Members of the faculty

have the cameras and the technical knowledge for operating them. We also consulted *Producing School Movies*[1] and *How To Make Good Movies*.[2]

Camera shops are cooperative. Publications of camera manufacturing companies provide many helpful ideas. But among the many amateur photographers of today, there are always some teachers and some parents who have the equipment, the technical knowledge, and the experience necessary to make good films.

Preparing the Scenario

We have given special attention to the preparation of the scenario for a movie, for its educational values for the children. For example, in preparation for filming *Bicycle Safety*, we worked thru the school's safety council. Representatives to the council went back to their rooms and presented the plan to their classes. The members of the classes then prepared a list of bicycle safety hazards, safe ways to ride a bicycle, special hazards in our community, and rules for the proper care of a bicycle. The children had good suggestions, too, on how to dramatize these points. In this way the children had a real purpose for using many language arts skills. In addition, the ideas on bicycle safety were impressed upon their minds.

The council took the ideas and suggestions coming from the various classes, edited them, and prepared a scenario of the proper length for the amount of film available. Then the length of each shot or sequence was established in order to keep within the time limits of the film.

Selecting Actors and Securing Props

Choosing the actors for the sequences and securing the necessary equipment and props was the next step. As any experienced teacher knows, to avoid problems, care had to be exercised in selecting the children to act in the film. The necessary equipment and props were easily found among the children's possessions.

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[1] Child, Eleanor D., and Finch, Hardy R. *Producing School Movies*. English Monograph No. 12. Chicago: National Council of Teachers of English, 1941. 151 p.

[2] Eastman Kodak Company. *How To Make Good Movies*. Rochester, N. Y.: the Company, 1938. 230 p.

Making Titles for Filming

Titles for these silent films can be made in many ways. We have used titles drawn and painted by the art classes, titles composed of commercial letters sold by camera shops, and titles made of felt-backed letters on a flannelboard. Ingenuity, a sense of appropriateness, and available materials will take care of the titles.

In the film, *How To Be a Good Patrol Boy*, we used only a main title, and then prepared a commentary to be read as the film was shown. Again, we had an opportunity to give the children practice in writing and speaking.

Filming Scenes in Proper Order

We try to shoot our sequences in correct order as nearly as possible. This procedure reduces the number of splices necessary in the final film.

Trick shots—We used some simple trick shots to make the film more interesting and to make a point more dramatic. For example, a bicycle was made to jump up and to come to the boy in one scene. Of course, this trick was simple reverse action.

Avoiding waste—Poor photography, mistakes by the actors, and scenes that do not measure up to expectations will ruin some film. Because our budget is limited, we try to avoid waste by careful planning, rehearsing the scenes before shooting, filming in good light, and exercising special care with the adjustments of the camera.

Enduring Usefulness of Films

We have found that these films can be used year after year. One of the first events each fall is an auditorium assembly for showing the slides on the particular safety hazards around our school. These slides make an impression that a general commercial product does not because they show surroundings that the pupils know and situations with which they are familiar. Another film of continuing value is *How To Be a Good Patrol Boy*. It shows our particular problems and has a special meaning to each boy as he becomes a member of the D. McRae patrol.

Project Feasible—Results Valuable

What we have done is not unusual. Probably many schools have accomplished greater things with finer equipment. But we believe our experience illustrates the fact that it is possible for almost any school to produce materials of this type inexpensively and without a lot of complex equipment and expert technical knowledge.

The results are worthwhile in the spontaneous interest of the children, in facts learned well in many of the subject areas, and in meaningful practice of many of the skills of arithmetic, art, reading, speaking, spelling, and writing.

The materials of instruction—textbooks, reference materials, library materials, visual aids, general supplies—are important instruments in the instructional program. And as new teaching methods and technics are developed, new equipment and instructional materials should keep pace. The selection and use of these materials cannot be left to chance. Provision should be made for continuous evaluation of instructional materials, and for replacing and replenishing them as the need arises. This requires the principal to have information on the latest developments in instructional materials, and to make sure that teachers have access to such information. Effective technics for cooperatively examining, selecting, and securing these educational materials should be developed. Important, too, are proper classifications of these materials and a workable system of distribution. The principal has the responsibility for seeing that necessary technics are developed in all these areas.

—GINGERICH, WESLEY. "What Principals Say. . . ." *National Elementary Principal* 35: 10; October 1955.

Picturing Ourselves at Work

By REO HABERN
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North Waco Elementary School
Waco, Texas

At the present time approximately 370 classroom teachers are employed in the Waco elementary schools. With a staff of this size, changes in personnel are frequent, with some employment of new teachers thruout the year as well as at the beginning of the school term. Thus, we have a constant need for the orientation of new personnel.

Currently, the school administration sponsors a week-long series of orientation sessions for new teachers. This program affords them an opportunity to meet the entire supervisory staff and get an overview of the total school program. At best, however, this type of orientation is incomplete without seeing the children in various types of classroom activities. For this purpose the 35 mm camera, as it catches actual classroom experiences, becomes an effective aid for orienting new and inexperienced teachers.

Another area of need for slides is with practice teachers. The local university does not operate a laboratory school but makes arrangements with the public schools for practice teaching. The following anecdote, the reaction of a practice teacher after a session with her critic teacher, illustrates the confusion in the minds of many student teachers: "I seem to be all confused. When I was in grade school, I learned by subjects, I never heard of units. I have read extensively about the unit in textbooks and heard scores of lectures, but when I sit and watch children at work in the classroom, I become somewhat mixed up. It is difficult for me to see where the Three R's come in. If I could see one of these units thru from beginning to end, I believe it would clarify my thinking; but, unfortunately, my time in the classroom is too limited."

Indeed, there would seem to be room for confusion, but at the moment no solution was in view.

Birth and Growth of the Idea

A few days after the above incident the principal, while observing a filmstrip in a classroom, began toying with the idea that perhaps an entire classroom unit of work could be filmed on 35 mm slides. It seemed worth talking over with the consultant in audio-visual education.

The audio-visual consultant expressed hearty approval and suggested also making a tape recording of the voices of teachers and children in various parts of a unit of work. Such a tape, he explained, would give the viewer a clearer interpretation of the slides and would, in addition, provide an experience for the children in using the tape recorder. The principal and the consultant agreed that the next step was to present the project to the building faculty.

At the next regular faculty meeting, the proposed project was presented. Out of the discussion which followed, definite objectives were agreed upon as guideposts to future planning and execution of the project.

The following points were considered most significant in the over-all planning:

1. The teacher should be familiar with the types of scenes considered best for balance, perspective, and meaning.
2. Scenes should be planned to show unit development, and the temptation to select those too showy or rehearsed should be avoided.
3. Scenes should be discussed, but not necessarily rehearsed, in order to allow for pupil and teacher spontaneity in introducing elements not previously planned.
4. The school principal, the photographer, and the teacher should do some joint preplanning of the unit in order to formulate a tentative sequence of scenes.
5. Tape recordings should be rehearsed with the recorder several times and played back for accuracy in timing.

A Typical Procedure

The 35 mm camera with flash attachment and a supply of flash bulbs was kept in the office of the principal. He, being the office photographer, was subject to call at any time the teacher or children discovered an opportunity for a good picture of some particular phase of the unit in progress. Altho generally the pic-

tures were planned, the children had ample opportunity to create interesting subjects. Each child in the room had a chance to be in at least one picture. In general, the following types of shots were taken:

1. The teacher and the class discussing the general theme of the unit, with a pupil recorder writing suggestions on the chalkboard
2. The completed plans as agreed upon by pupils and their teacher
3. A picture of each of the various committees at work, for example, those in a sixth-grade unit on air transportation:
   a. History of aviation—the group in the library at the reference shelf
   b. Types of planes—committee members busily engaged making various types of model planes
   c. Travel by air—committee members conferring with the ticket clerk at the local airport
   d. The weather as it affects air transportation—the committee visiting the weather bureau
   e. Air traffic—the committee observing activities in the tower of the local airport
4. The whole class on a field trip or excursion
5. The class in the process of viewing a film specifically related to their unit
6. A mural made by the children as part of their art work.

In this experiment, the average unit of work required from 16 to 20 color slides to portray its development adequately. (Kodachrome film was used exclusively.)

The class viewed the slides several times while preparing script for the tape recorder. After the script was written, a recording was made and timed to allow for normal speed of continuity in showing the slides. Pupils making the recording gave special attention to such matters as diction, enunciation, and inflection. The slightest error was quickly noted and retaped until a high quality was attained. After the class had evaluated the entire production, the slides were shown to other class groups who offered constructive criticism.

Progress to Date

In the course of eight months, the following units of work, complete with appropriate tape recordings, have been completed:

Grade	*Title*
II	At the Circus
III	At the Seashore
IV	Living and Working Together at Home
V	The Story of Lumber
VI	Ceiling and Visibility Unlimited

For Grade I, pictures were made of the children engaged in various activities thruout a typical school day: Reading Groups, On the Playground, In the Lunchroom, In the School Library, Doing a Rhythm, and Working with Numbers.

These pictures will be exhibited to parents attending our annual spring preschool round-up of six-year-olds. It will give them an idea of what their children may look forward to in the ensuing year.

Our school patrons were invited recently to the school to preview one of the completed units. Their response was enthusiastic. The opportunity to see a project from beginning to end was a new experience for them. An added thrill was seeing their children in action and hearing their voices by means of the tape recorder. At the request of the audio-visual consultant, one film has been shown at meetings attended by all elementary-school teachers. The immediate result was a recognition of the far-reaching possibilities this medium has for orienting beginning or practice teachers, as well as the inspiration it affords more experienced teachers.

Make Your Own Filmstrips

By PAUL E. FENSKE
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Edison School
Denver, Colorado

AT EDISON SCHOOL, we have found that our pupils have not been particularly interested in filmstrips that give directions for doing things. The filmstrips are good, but they do not apply locally. Often we want filmstrips for explaining to the children how to do things around our building or neighborhood.

Subjects for Filming

For example, a commercial filmstrip on bicycle safety portrays the beginner learning to ride a bicycle on the public sidewalk, but because in Denver the children are not permitted to ride on the walks, this film would confuse them. Therefore, we decided to make our own filmstrip for teaching bicycle safety. This production was possible with the assistance of the department of audio-visual aids and its director, Ralph W. Sellinghausen.

To get started, we needed a camera, film, and actors. We had a good 35 mm camera and color film which would take the pictures for slides or filmstrips. Several pupils who owned bicycles were eager to take part.

Since we needed a plan, we listed our local safety rules in the order we wanted to present them. The list ran something as follows: riding my bike to school, dismounting at the driveway, walking my bike to the bicycle rack, locking my bike. Then, for several hours we took pictures of such scenes as a boy making a left-hand turn correctly; a girl stopping for a stop sign; and other pupils making right-hand turns, stopping for traffic signals, and oiling and repairing their bicycles.

The boys and girls who took part in the pictures explained what they were doing and why they were doing it for a tape recording. The film and the tape were most interesting to those who took

part in the production, but they were also very interesting to all the children in our school because the scenes and the characters were familiar. It proved to be a wonderful experience for all of us.

Using the Cafeteria

Since our lunchroom is small, making efficiency essential, we tried making another filmstrip of this type for teaching the children how to use the cafeteria. This filmstrip we called *We Eat in the Cafeteria.* It goes something like this: We line up; take a tray and a napkin; take a knife, fork, and spoon; wait our turn and take a plate; take our milk and a straw; put all these on the tray and carry them to the table; and sit 10 at a table and eat. Another group of pictures shows the steps the children should follow before they leave the lunchroom. The use of this filmstrip has helped the children get served more quickly, and yet they are not rushed to make room for those who have the next lunch period.

This filmstrip will be used early in every school year for the first grades, as a review for the other groups, and for children new to the school. This filmstrip, too, has a tape recording to go along with it.

Staging a Story

We have made another filmstrip called *Red Riding Hood.* A second grade acted out the parts of the well-known story. Following the original, they acted the story as it might have been had Red Riding Hood not talked to strangers. They added the admonition that children must be careful about speaking to people when they are going to and from school. Even a year later the children still enjoy this filmstrip, and they have learned a lesson from making it.

Kindergarten Safety

There are many more ways to use this audio-visual aid in your school. For the kindergarten children we are now making a filmstrip on how to be safe around the school. The filmstrip shows how to carry scissors; how to put things away; how to wipe up

spilled water; how to line up for fire drills; how to keep feet out of the way; and how to play on the playground equipment. It seems to be really making a lasting impression on these younger children.

Many Other Subjects

Another way to use this aid is for the children to take the camera along on a trip to the museum and make a picture record of the things they see or the teacher may go by himself to make a pictorial record of the museum pieces. After the films are developed, the children who took the trip can make a tape recording of their observation. Later, they may take it around to other children who would like to hear about the trip. Making the filmstrip helps the children remember what they saw and stimulates their interest in taking more trips.

You can take a trip to the packing house, the local bakery, the dairy, the railroad station, the bus terminal, the fire house, and many more interesting and educational places right in your own back yard. There are commercial filmstrips on all these subjects, but the children are much more interested if they know a few of the characters and recognize the scenes as those in their own community.

Adaptability of Filmstrips

We have described only a few subjects for locally produced filmstrips. You may have many other ideas where this aid would be useful. In all of them, the participation and the appropriateness will be the special characteristics of value.

CHAPTER
SEVEN

Collecting and Distributing Instructional Materials

ORGANIZATION may bring red tape because, for organization to function with continuity, some records must be kept. One problem in keeping records seems to be to keep them from becoming more complicated than necessary. Certainly, we want to keep red tape from stifling initiative and yet have efficient management. This chapter gives some ideas on simplicity in managing materials.

Another problem that arises for every classroom teacher is that of providing the little things in materials and supplies that make his classroom unique. Probably the average teacher spends at least $15 annually out of his own funds for classroom flexibility and individuality. Some spend much more. Perhaps some of this spending is inevitable and desirable. However, it would seem that a contingency fund for classroom teachers would have its points. Altho the problem is not solved in this chapter, there are suggestions.

Still another problem in managing materials is to fit them into a concept that embraces good use. Closets, or storerooms, or more elaborate depositories are used for housing materials. The evidence in this chapter is that, regardless of how humble, the spaces are being thought of as instructional materials centers. This designation signifies the importance of materials in the life of the school.

Distribution of Instructional Materials

By JOHN J. McMANAMA
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SOMEWHERE in most schools there are quantities of maps, charts, filmstrips, pictures, and other materials designed to aid instruction. For encouragement to use these materials a busy teacher must (a) know what is available, (b) know where it is located, and (c) acquire it with a minimum of red tape.

This article describes an attempt to organize and administer instructional materials to meet the above requirements.

Our Problem

Our school was faced with a problem common to many schools. We had 300 filmstrips stored in a cabinet but neither classified nor indexed. A filing cabinet full of neatly mounted pictures gathered dust in a corner. A large closet in the principal's office contained hundreds of pamphlets, charts, pictures, and other materials which had been acquired over a period of years. If it *occurred* to a teacher to ask for material on a given subject, it was possible that someone might remember an appropriate pamphlet but *doubtful* that it could be found.

We had other materials and resources to which access was difficult for lack of organization. There was a list of the persons in the community who responded to an appeal to make themselves available as special resources because they had travel, professional, or other experiences. Another list contained titles of tapes on many subjects which a nearby university will copy from their masters to the tapes of local schools free of charge.

All of the aforementioned materials were available to teachers providing they knew about them and were persistent enough to dig them up. Nowhere was there a central file for locating all available material. We wanted a classification system so well

organized that a teacher working on a unit on "The People of Mexico" could find in one card index system under *one* heading the description and location of all filmstrips, pamphlets, tapes, pictures, and other miscellaneous material available.

Experimenting with Classification Systems

The first problem is how to classify material. For example, an alphabetical index of a filmstrip entitled *Children of Mexico* would be meaningless. The logical classification for such a filmstrip would be under the subheading *Mexico*, under the major heading *North America*, under the general area of *social studies*. Thus we used a three-degree breakdown of headings by subject.

Area classification—After experimenting with major classification areas, we decided on the most common names of subjects themselves as being logical and mutually exclusive. Schools organizing classification systems would do well to set up areas along lines paralleling their own course of study organization. We set up six areas:

1. Social studies including geography, history, and civics
2. Language arts including reading, writing, spelling, grammar, and literature
3. Arithmetic
4. Science and health
5. Physical education, recreation, and safety
6. Art and music.

Major headings—Selecting major headings within each area was the most difficult task in the planning stage. We first tried the Dewey Decimal Classification but discovered that curriculum materials actually fall into a very narrow segment of this broad system. With modifications we did use it finally for social studies. In the other areas our final choice of headings came from general textbooks that were organized into meaningful units along subjectmatter lines.

Illustrative of how the system works, the three major headings in the science and health area are:

1. The Earth and the Universe
2. Living Things
3. Matter and Energy.

Subheadings—The same procedure which was used for developing major headings offered a logical system of subheadings. In some cases the nature of the material on hand made it necessary to create new subheadings but this modification did not upset the general index plan.

Under the major heading of *Living Things* we have listed the following subheadings:

1. How Plants and Animals Grow
2. Living Things and the Seasons
3. The Behavior and Habits of Animals
4. The Human Body and How It Works
5. Conservation of Our Resources.

Setting Up the Card Index File

We used standard library file card cabinets to house our system. Each area is preceded by a distinctly colored card and then the major headings are a different color so that they are easily located. The subheadings are typed on the standard buff index card. The individual cards are then filed behind the proper subheading.

FIGURE I

An Index Card for a Filmstrip

		Filmstrip
Sci. 52		*Using Our Forests Wisely* Grades 3-6 Color. Illustrates reason for conserving our forest resources with beautiful photography and detailed drawings. Included are: animals of the forest, wood resources, enemies of the forest, and sensible conservation methods.

The card itself is organized for utility. Figure I shows one of the cards selected from our science and health area. In the upper right-hand corner appears the type of resource: pamphlet, tape, map, community resource, or any one of at least 20 types of materials available. Next, the title of the resource is listed along with pertinent information. Then for the convenience of the teacher all material is graded. Finally in the left-hand column a code number indicates to the teacher where this particular filmstrip can be located.

Storing Instructional Materials

The problem of storing instructional materials for access convenient to the classroom teacher will vary with the facilities of each school. In our school we have three different locations for instructional materials: (a) a centralized teachers workroom, (b) files and closets under office control, and (c) classroom storage under teacher assignment.

In a teachers workroom—Any material which is in constant use and is bulky enough for easy inventory is kept in a workroom for the teachers. There are no forms to fill out for borrowing. A teacher merely takes what he needs and returns it when he has finished with it. This system has the advantage of being convenient and will succeed only if the teachers cooperate by returning materials promptly to their proper places. Only large items, such as filmstrip cabinets, phonograph records, and professional books, are stored and distributed in this manner.

Under office control—All small items, such as pictures, maps, pamphlets, and charts, are stored in the central office where they are filed according to the general classification plan. A simple record is kept of the loan of these materials since the teacher is more likely to forget them.

With a teacher—Some instructional materials, which are limited to use by one or two grades, are housed with a teacher in the grade area. In such cases the teachers concerned know where these commonly used materials are. In addition, however, a file card is maintained.

Most of our instructional equipment is managed in the same manner. For example, the filmstrip projector for the fourth grade

is assigned to one fourth-grade teacher. Care is taken to distribute the equipment and materials to different teachers to avoid overloading any one of them.

The System in Balance

We believe that our method of organizing instructional materials meets the requirements of helping the teacher know what is available, where it is, and minimizing red tape. Some abuse and carelessness occurs which possibly could be avoided by a plan of complete central control, but we feel that this loss is far outweighed by the sound use to which the materials are constantly put. Most teachers appreciate the convenience of the system and have cooperated to keep it functioning well.

In summary, it is hoped that the reader will be convinced that a science corner can contribute a great deal to the program in every classroom. A convenient and prominent place in the room should be chosen so that the children will have easy access to it. If enough room is available, the center should contain a table, storage space for equipment, bookshelves, and a bulletin board.

The science corner should be an interesting, active place. It should be characterized by variety, practicality, and usefulness. The center should be a "living" one, not a museum or dust collector. It must be arranged attractively so that children do not become confused by a hodgepodge of materials. On the other extreme, it must not be vacant or empty looking or the children will not be challenged.

A science corner is a "must" in every elementary-school classroom. Whether it be called "Science Center," or "Science Corner," whether it be simple or elaborate, no room should be without one.

—NEAGLEY, ROSS L. "The Science Corner—A 'Must' in Every Classroom." *Science for Today's Children.* Thirty-Second Yearbook. Washington, D. C.: Department of Elementary School Principals, National Education Association, 1953. p. 280.

Administering Instructional Materials in Small School Districts

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THE organization and administration of instructional materials becomes a very important phase of the work of the elementary-school principal when he realizes that the quantity and quality of instructional materials can materially stymie or stimulate the school program as well as affect school morale. This article describes some practices in relatively small 10- to 12-teacher schools.

Estimating Needs and Maintaining the Inventory

Classroom teacher participation is central to the procedure for determining what supplies and materials are needed. Participation is secured in various ways.

In one school, in the spring of the year, each teacher thinks thru his plan of work for the following year in order to estimate supply needs. Special needs are determined by conferring with the teacher who is currently working with the children he is to teach in the fall. He studies reading profiles, notes books read by the children independently, checks on pupil placement in the basic reading and arithmetic series, reviews reports of special music interests, art skills, and the physical education program. Estimates of the instructional needs are then made in terms of the program, the teacher's own and the school's philosophy, and of the class size plus five.

[1] With the cooperation of George E. Graff, superintendent of rural education; Doris F. Chamberlain, principal in the town of Andover; George H. Patros, principal in the town of Columbia; and Frank A. Formica, formerly principal in the town of Tolland.

When the supplies for the year have been received, a master inventory is prepared. Each classroom teacher keeps a record of his withdrawals from supplies in the central stockroom, the doors of which are open to all teachers at all times. From the planning and distributing procedures each teacher develops a sense of professional responsibility in the economical, yet effective, use of all instructional materials.

In another school, a general supply requisition is circulated to the classroom teachers each spring to get their first estimate of needs for the next year. Next, the staff meets to discuss the approximate quantities of items necessary for the school, and it meets again with a representative of a school supply company who displays samples and discusses their use. The interest of the teachers, the type of inservice education contemplated, any proposed curriculum revision, and staff turnover are all factors which then enter into the preparation of the master supply requisition.

Once the supplies have been received, they are placed in a central storeroom from which each teacher requisitions supplies twice monthly or as emergencies occur. As requisitions are filled by the principal with student or volunteer parent assistance (no clerical assistance is provided), the items distributed are deducted from the master inventory to keep it current. If needed, additional materials are ordered during the year.

Storing Materials

In each school, most materials are stored in closets and stockrooms depending upon the facilities available. Audio-visual aids are managed as library materials in one school.

In another school, instructional materials are assembled in a room adjoining the teachers room. Here filmstrips stored in wall racks, the motion picture projector, the tape recorder, the phonograph-radio combination, records, and professional books and magazines are readily accessible with a regular charging system in effect. Some primary classrooms are equipped with record players, the goal being a record player per classroom. Physical education supplies for classroom and playground use are assigned to classrooms with a reserve supply kept in a central place to be requisitioned and returned on a daily basis.

Maintaining Equipment

The maintenance and repair of equipment is another responsibility of the principal who each summer sees to it that all equipment, such as the motion picture projector, the duplicating machine, the typewriter, phonographs, slide projectors, opaque projectors, and pianos, are put into first-class condition. Money for this purpose is included in the board of education budget. In some instances, the custodian is able to repair equipment. In other instances, the servicing of equipment is provided by the company from which it was purchased.

Adequate Financial Support

The philosophy of the staff and the kind of long-range planning that has taken place are important in obtaining adequate funds for instructional materials. At the level of action these statements mean the building of public understanding of the school program and the encouraging of teacher participation.

Building Public Understanding

When parents, teachers, and children understand the program and when the effective use of materials already on hand can be demonstrated, the board of education will usually grant budget requests and, moreover, will urge approval by the local board of finance, a New England governmental agency with final responsibility for levying local property taxes. To develop understanding, the school program must be continually interpreted to members of the board of education, the parent-teacher association, and the community as a whole. Then the budget itself must be realistic, reflecting a reasonable rather than a rigid economy. The goal should be a program which will govern the appropriation of funds rather than a budget which governs the program.

In some towns, each classroom teacher meets with the parents of the pupils at least once a year to discuss the class program in action. Parents are voters who want to provide their children with a good education. Their support is grudgingly or freely offered or even withdrawn according to their understanding of what con-

stitutes a good program and what is needed to make it possible in their school.

Planning with the Teachers

The more that teachers can be brought into the planning, with freedom to express their needs and their wishes, the easier it becomes to justify those needs to those who can grant them. In one school, a long-range plan to improve the quality and quantity of instructional supplies and equipment is in effect. Each year, an amount equivalent to what would be needed to equip a new classroom is included in the budget as a long-range item for improvement. Thru staff planning at group grade levels, needs are determined and recommendations made for the purchase of equipment and materials. Then program plans are projected three to five years in advance since each new program development—speech work, for example—necessitates additional supplies and equipment.

Flexibility thru Contingency Funds

Altho materials are ordered on an annual basis, there are always certain unplanned needs which must be met. Contingency funds for this purpose are made available in a variety of ways. In one town the board of education supplies $15 per classroom annually for educational study trips and the parent-teacher association provides $2 a month for a book or a phonograph record which can be used by the school as a whole. In another town, the board of education sets up a petty cash fund for the principal to use as emergencies arise: for postage on films, for the rental of musical instruments, and for teachers to use for incidental classroom materials. These miscellaneous items cannot be ordered in advance because the need is not always apparent at the time the general over-all order is placed. In all cases where contingency funds are set up, they should be used with discretion, and a suitable record of expenditures should be maintained.

An Open-Door Policy on Instructional Materials

By T. A. ALLASINA
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Bailey Gatzert School
Seattle, Washington

THE proper management of supplies within a school is conducive to good teaching. The supplies that remain on a stockroom shelf are not of much help to anyone.

The plan followed at Bailey Gatzert School began several years ago when the topic was discussed in a teachers meeting. All the teachers were of the opinion that they should have free access to the stockroom supplies and books. Many times they were unable to anticipate their needs completely, and as a consequence the progress of classes was hindered by lack of or shortage of some material.

After discussing the advantages and the disadvantages, the staff decided to try out an open-door stockroom where teachers would be free to check out supplies and primary books at all times. Each teacher would be expected to leave the room in good order.

Budgeting for Materials and Equipment

To make the plan work, teachers needed to have some knowledge of the budget. Therefore, the budget was explained so that the teachers understood the amount of money allocated for books and supplies.

In Seattle the amount of money allocated to each school is based on the enrolment at the end of the first month of school. The enrolment figure is taken from the monthly report sent in to the superintendent's office by each school. Schools are allotted $2.95 per capita for books and $2.90 per capita for supplies. In addition, credit is given for *new* rooms added to the building as follows: for primary rooms, $175 for books and $100 for supplies; for intermediate rooms, $250 for books and $150 for supplies.

A contingent fund is also allotted each school for the replacement of typewriters, movie projectors, television sets, radio sets, or any other equipment, a minimum of $100 for small schools and 20¢ per child for the large schools. In addition to funds from the district, we usually have several paper or other drives a year to build up a total fund of $1000 or more.

Managing Materials

In the materials center, which is located near the principal's office, supplies are all labeled and stacked on shelves and in cabinet drawers. All the writing paper is stored in one section, according to size, and a chart lists the sizes and the grades where each type is used. Thus, the packages do not need to be torn open to locate a particular item.

Paints, paste, raffia, wood, brushes, and similar items are stored in another section of the stockroom, easily accessible to everyone. Supplies are checked weekly to replenish the stock. At the end of the school year, teachers check out enough supplies, as well as books, for the opening of school. The space in the stockroom can then be used for materials coming in for the new year.

Audio-Visual Materials and Equipment

Visual materials and equipment are also housed in the center. They include phonographs, radios, maps, three large portable screens, three silent film projectors, and over 700 filmstrips. Several small library tables with rubber wheels serve as carts when teachers are gathering and taking supplies and audio-visual aids to their rooms.

The filmstrips have been purchased by means of our contingent fund from an approved list as established by the audio-visual department. The filmstrips are labeled by number and title. Then in the catalog they are listed under subjectmatter headings and in separate sections for primary-grade, intermediate-grade, and upper-grade children.

One or two rooms for each grade level are provided with black window curtains so that films can be shown. In addition the auditorium and the science room are similarly equipped.

Book Storage and Distribution

In the book section of the center, lists of all books, classified according to grade and difficulty, are posted on the wall so that at a glance teachers can find material suitable for their groups.

A record sheet is kept in a manila folder near the books and on it each teacher records the number and titles of books withdrawn. When the books are returned, the teacher checks them off the list. This record shows immediately where the books are in the building and the number in use by each teacher.

All books in the building are listed in the card catalog, thus giving us a complete inventory of books on hand. As new books are received, they are cataloged according to the Dewey Decimal System and forwarded to the several rooms. From the card a teacher can learn the cost, grade level, author, and content of the books, and can find out where the book is.

Besides this central catalog system, we have two complete reading libraries in the school. Each classroom has access to one of them everyday. Reference materials, encyclopedias, and the usual library books are housed in these two libraries. Then we have additional library facilities in the primary rooms where each one has from 100 to 200 books.

Appraising the Policy

According to their comments, the Bailey Gatzert teachers like the open-door policy. They feel free to come in at their own convenience to secure the items desired. The orderly method of arranging materials in the stockroom with notations as to size, grade, and ability level facilitates their use.

The teachers look upon their stockroom as a source of ideas, too. The constant contact with books and supplies familiarizes them with what can be obtained, and seeing such a variety of articles and equipment often inspires them with new ideas.

The teachers take pride in keeping their supply room in excellent order. Since they know they may have materials at any time, there is no hoarding. Under their plan they feel that they get the supplies when they are needed.

Just One Place To Look

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and Curriculum Materials Center
Schenectady Public Schools
Schenectady, New York

WE ARE now in the process of expanding the Audio-Visual Department into a Curriculum Materials Center where various instructional materials will be housed and from which they will be circulated. The need of having all instructional materials in a central place where they can be made readily available has been recognized for a long time. The realization has been gradual and will continue to be so for some time. This interim between wish and fulfilment has given the administrative staff and those concerned with beginning the program time to think over carefully what the needs are and how they can best be met.

As we visualize it, the Curriculum Materials Center will be a vast reservoir thru which instructional materials flow to the classroom teacher.

The Audio-Visual Department appeared to be the natural place for housing and distributing instructional material. In our present thinking, this Department would expand to include curriculum materials in addition to films, filmstrips, records and recordings, tape recordings, pictures, exhibits, and charts. Curriculum materials include courses of study, bulletins to teachers interpreting school philosophy and policy, committee reports, reprints from educational periodicals, state bulletins, and work sheets.

Impetus for Immediate Action

The impetus for housing this material in one place came from the annual need for preparing teacher's kits, a collection of materials presented to new teachers as part of the basic orientation program in the Schenectady School System. Before the new arrangement, the material had been housed in various places—

with department heads, committee chairmen, and administrators at the Education Building. The task of locating these materials each year was time consuming because no inventory of such materials was available, and thus stencils had to be located or cut and material mimeographed at a mad pace.

Action Begins

During the spring of 1954, the first steps toward this expansion into a Curriculum Materials Center began with the addition to our department of all Schenectady-produced bulletins relating to the elementary-school program. The Resource Teacher for Elementary Education and the Assistant Superintendent in Charge of Program aided our department in devising an operable system for storing and distributing this material. New shelving, vertical files, and catalog trays were added. The wealth of material was sorted into subject areas, counted for inventory purposes, and shelved, ready for distribution.

Classifying and Cataloging

It was also necessary to decide upon an adequate system of classifying and cataloging the materials. Since the junior and senior high-school curriculum materials would eventually be a part of this collection, the system needed to be functional for all three levels. Our aim was to work with the material at hand and plan for what would be added in the future. Conceivably at each level there would be additions and withdrawals in the course of time.

In the existing audio-visual library all materials were cataloged by subject. Since this system has proved satisfactory, it was expanded to encompass the curriculum materials in much the same manner. The first consideration with this arrangement was to make materials available in a simple way.

The catalog card for curriculum materials is illustrated in Figure I. Besides the subject and grade level, the front of the card serves as a continuing inventory.

FIGURE 1

Title Card

A E Arithmetic and your child. Schenectady,
1-6 April 1953.

7 p. mimeo.

500—50 kits 6/54
450—25 Elmer Sch. 1/55
425—50 Paige Sch. 2/55

(Tracing—back of title card)

T
s Arithmetic, Elementary
s Schenectady
Kit
Stencil

The tracings on the back of the cards serve several purposes: the letter *s* preceding *Arithmetic, Elementary* indicates that there is a subject card in the catalog with the heading *Arithmetic, Elemenary;* the word *Stencil* is a department tool that indicates a stencil is on file for this material; the word *Kit* means that this material is used for new teacher orientation.

Shelf Arrangement

We examined the various ways of shelving used by libraries and the few existing materials centers and after much thought, decided to shelve by subject, a way that would make browsing most worthwhile. Perhaps, eventually our quarters will be spacious enough for individuals or committees or departmental groups to pursue their interest field within the center.

An example of our shelf arrangement follows:

A-E 1-6	General elementary level arithmetic
A-E K-3 A-E 4-6	Subdivisions of the elementary arithmetic including more than one grade
A-E 1 A-E 2 A-E 3 A-E 4 A-E 5 A-E 6	Arithmetic for a specific grade

Since the bulk of the material falls within the general elementary level, it served our purpose best to go from the general to the specific. This arrangement continues to be satisfactory since it fits our present needs and allows for expansion.

Passing Judgment

After a year it is possible to weigh the advantages of the Curriculum Materials Center for our school system:

1. **The clerical work load of cutting stencils, mimeographing, and collating is handled efficiently in our slack periods rather than in an unsatisfactory spurt when the need is urgent.**

2. The continuing inventory makes it possible to keep an ample supply of materials on the shelves.

3. Duplication of professional effort is avoided when the work of former committees, as well as material from other systems, can be examined and evaluated by active committees. Thus, we may profit by our own past performance as well as by that of our colleagues in other systems.

4. The history file contains material which is no longer of current use but is of historical value to us.

5. The staff in charge of such a program becomes familiar with existing material, what fields are adequately covered, and those which need more emphasis. The administration can then draw upon these people as resource personnel in curriculum development.

6. Staff members can easily identify those materials frequently used. They can recognize equally valuable material which has not received sufficient publicity to encourage its use.

7. The daily delivery and pickup service previously limited to audio-visual materials has been extended to include curriculum materials.

8. The development of the whole educational program or that of any specific activity can be traced.

9. Bulletins listing new and pertinent curriculum materials are issued periodically.

10. Some standardization of format of these materials is beginning to take shape.

11. Rewriting and revision are a continuous operation because having the materials in one place makes review easily possible.

As the Center becomes more acceptable, more materials flow in from channels that originally resisted the idea. The increasing requests for materials indicate that the Center is gaining recognition at home as well as elsewhere.

Growing Up

It looks now as if we are successfully past the formative stages of housing and distributing curriculum materials. New and better ideas for strengthening the collection and improving our service will, no doubt, come along as we "age."

Our aim is to make each telephone request or visit to the Curriculum Materials Center a pleasant and rewarding experience. The interest and cooperation of the entire professional staff is necessary if we are to achieve an effective program. Staff interest, participation, and cooperation are ever increasing due, we believe, to having *just one place to look*.

CHAPTER
EIGHT

Managing the Audio-Visual Program

CERTAIN problems appear in the audio-visual aspect of instructional materials that are not as prominent in some of the other types. For example, many classrooms cannot be darkened properly for good film showing. This deficiency continues in the face of the recommendation by audio-visual authorities that the classroom, under most circumstances, is the best place for showing films and for using other equipment that requires a darkened area.

There are many machines connected with audio-visual education. Until the classroom teacher becomes familiar with the equipment, he may hesitate to use it. Another problem is scheduling. Teachers need time to plan for selecting and showing films, particularly when the films must be obtained on loan. Interwoven with the various difficulties is inadequate financial support for the whole instructional materials program.

The foregoing problems and others are discussed in the articles in this chapter. The first article emphasizes the instructional use of audio-visual materials. The second and third articles are concerned with developing administration of audio-visual programs. The place of the coordinator is the topic of the fourth article. The fifth goes into using the equipment itself as material of instruction. And the last article stresses the need for interpreting audio-visual education to the public.

Teaching with Audio-Visual Materials

By HELEN RACHFORD
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AUDIO-VISUAL materials have become invaluable in developing the modern curriculum. The knowledge imparted by the spoken and written word is better understood when the learner has had the experience. It is generally conceded that the best substitute for actual experience is the seeing of pictures of events and processes and hearing the recorded sounds. Furthermore, the success of teaching with realistic, concrete materials is encouraging and gratifying to the teacher.

The use of audio-visual materials is accepted, but not very well understood, by people outside education. In a vague way they know that there are pictures and recordings which their children see and hear. They are not usually aware that these materials are planned and prepared for the classroom, for special subjects, and for particular grades. They are amazed to find out about the amount of good material that is available and are surprised to know that films and filmstrips have been designed to correlate with textbooks in many of the school studies.

Materials for Specific Purposes

Each type of audio-visual material makes its own contribution to the experiences of the children. Motion pictures are especially effective where motion is necessary to the understanding of the concept. How a plant sends its roots into the ground, how cells divide—these processes can now be seen. In the language arts, films offer motivation for speaking and writing and also give the child something to talk and write about. In social studies, dramatizations make people and events in history real and convincing. In such special subjects as narcotics, where the teacher does not have experience to draw on, they can give support.

For showing scientific and industrial processes, such as what happens in the nuclear reactor or how the human heart acts, animation cannot be excelled. Animated films have the added advantage of being objective and impersonal. This quality in itself makes them important in subjects which teachers find difficult because of the personal factor. In teaching certain phases of human growth and development, in influencing behavior concerning alcohol and tobacco, animation is likely to be more effective than live-action films.

Where motion is not an integral factor, filmstrips and slides have the advantage of concentrating attention. The teacher can control the speed at which the material is projected in using filmstrips and can change the order of the pictures in addition to controlling the speed in using slides.

One of the most important uses of audio-visual materials in the classroom is to provide for common experiences. Films, for example, give them much to think and talk about, and serve to bring children and ideas together. By giving meaning to spoken and printed words, films increase the children's ability to understand and to communicate.

Basic Practices in Audio-Visual Education

While audio-visual programs vary greatly, there are certain common basic practices. Consideration of items such as the following will indicate the effectiveness of any audio-visual program.

Selection of Materials

The wide participation of teachers, administrators, curriculum directors, and supervisors is important in the selection of materials. Grade-level groups of teachers, with some guidance, can outline their plans, select the materials they want, and decide which shall be reserved for them and for other grades. In many systems, teachers work closely with audio-visual and curriculum supervisors in planning their teaching program. The work of these supervisors is becoming so closely integrated that it is often hard to tell where one stops and the other begins.

Adequacy of the Program

It is important to the success of the program that the teachers be reasonably sure of getting what they want when they want it. Emphasis, however, should be on the quality of utilization rather than on the quantity of materials used. The need for materials is often greatest among teachers who are inadequately prepared. In turn, they may be the least likely to find out about and try the new mediums and to use them effectively.

Judging how many and how frequently audio-visual materials should be used is misleading unless such factors as how many are available, and how willing and able the teachers are to use them are taken into account. Some curriculum directors believe that an over-all average of a film a week is adequate. This number depends, of course, on the appropriateness of the material and the needs of the class. How difficult it is to get what they want influences the number and kinds of materials teachers request.

Availability of Materials

The facility with which the audio-visual program operates seems to bear direct relationship to its effectiveness. One way to strengthen the audio-visual service is to provide materials and equipment that are easy to get and easy to use. While adequate facilities do not in themselves insure good utilization of materials or better teaching, they help make the difference between a program which is vigorous and enthusiastic and one which is lukewarm. Teachers need to be freed from the routine operations of scheduling, checking, and operating equipment so that they can give more attention to instruction.

Inservice Education

The principles of good teaching, whether or not audio-visual materials are used, are basically the same. Interest in children, preparation for the lesson, careful planning, and working toward the purposes that have been set are always uppermost. Bringing new and exciting materials to the teacher's attention stimulates him. When teachers have confidence in their use of audio-visual

materials, they become enthusiastic and influence others. Providing helps in the form of film study guides, evaluations by other teachers, reports of experiences (whether successful or otherwise) others have had with different materials and equipment, demonstrations, and workshops on using and making materials vitalize and strengthen the entire program. In such subjects as music, storytelling, literature, and science, especially prepared radio and television programs for the classroom can be enjoyable and beneficial.

Attitude of the Administrator

Most administrators agree that audio-visual materials are effective in the classroom. Some think that teachers use too many, misuse them, or find them a lazy way to teach. Other teachers, they say, are not interested because too much work is involved. These two points of view seem irreconcilable, and perhaps are. The majority of teachers come somewhere between the two extremes. These comments apply to the use a few teachers make of audio-visual materials as well as to the use a few make of textbooks, bulletin boards, and other materials. However, the same administrators seem less disturbed over the misuse of textbooks and bulletin boards than over the misuse of audio-visual materials. Perhaps they have become callous to the other weaknesses. Perhaps because the audio-visual program is newer and more expensive, it looms prominently in the school budget and is, therefore, the subject of more concern.

If the administration understands the instructional program, gives adequate financial backing, supports the teachers in securing good audio-visual materials, provides continuous, consistent in-service education, and has confidence in the teachers, much can be accomplished thru the audio-visual program.

Establishing a 16 mm Film Library

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MOTION picture films used as instructional materials in elementary education have shown tremendous growth in recent years in both quality and quantity. The value of such materials properly used is widely recognized by educators and, as a result, an increasing number of schools are finding ways and means of making more educational films available to teachers and pupils.

This article describes some of the procedures used and problems encountered in organizing a film library in a small city-school district of nine schools and approximately 6000 pupils in the kindergarten thru Grade VI.

Leading Up to Establishment

For several years prior to 1953, each school was allotted a small sum for rental of educational films. Standard procedure was for teachers, at the close of the school year, to submit a list of films desired for the next year. These titles were, with few exceptions, taken from the catalog of the extension film library of the state university.

Confirmations of these orders were received by the time school began in September. In a few cases orders were placed after the beginning of the school year, and occasionally the principal would order educational films produced and distributed by commercial organizations.

Disadvantages of Renting Films

Among the disadvantages of this arrangement were: (a) by ordering far in advance the teacher many times did not receive

the film at the "teachable moment"; (b) many teachers failed to take the time to plan a film program and place an order; (c) newly employed teachers found it difficult to secure films and were forced to rely on those that had been ordered the previous year; and (d) there were many minor administrative problems involved in ordering, shipping, returning, and accounting for the films.

Alternative to Rentals

Because of these and other disadvantages the district administrative group, consisting of the superintendent, the elementary-school principals, and the consultants, decided to change the method of procuring films.

Two plans were considered: One was to affiliate with the audio-visual department of the office of the county superintendent, and the other was to establish a film library within the district. The latter step was decided upon largely because it was felt that teachers would have ready access to the films when they needed them, and that over a long period of time the cost of the library would not be much greater than the county service charges.

It was also decided that audio-visual materials other than 16 mm films would not be purchased or stocked as a part of the central film library. Since each individual school had in the past accumulated materials, such as filmstrips, slides, and study prints, we agreed to continue this arrangement and to allow continued additions as the curriculum materials budget would allow.

Establishing the Film Library

The first step in establishing a film library was the designation of an audio-visual coordinator by the superintendent, late in the 1952-53 school year. This responsibility was assigned as an additional duty to one of the members of the existing staff of consultants, and a sum of money sufficient to purchase approximately 40 16 mm films was made available for the next year.

Because these steps were taken at the close of a school year, there was insufficient time to make careful, previewed selections of films for initial purchases. Therefore, in order to have a few films on hand for the beginning of school in September, the

principals and the consultants met as a committee in May and agreed to the purchase of some 20 films which in recent months had been used successfully, and which were considered basic supplementary materials in social studies and science.

Audio-Visual Committee

Following the first purchase of films, the superintendent appointed an administrative audio-visual committee composed of three principals, one consultant, the assistant superintendent, and the audio-visual coordinator. The functions of this committee are: (a) to establish procedures for preview and purchase of additional films, (b) to establish procedures which will encourage the most effective use of the materials, and (c) to recommend policies relating to audio-visual materials and equipment.

Preview and Purchase of Additional Films

With approximately 20 films as a beginning, the committee developed a list of curriculum areas where films would prove valuable as supplementary aids. The coordinator then surveyed film catalogs and ordered for preview those titles appropriate to the curriculum areas. Teachers were invited to suggest films which they would like to have on the preview schedule, and these too were ordered.

A preview schedule was arranged in such a way that similar subjects could be seen at one preview session. For example, a major social studies unit for the second grade is "the farm." Hence, most of the available primary films relating to "the farm" were seen at two preview sessions.

A general invitation to attend the previews was issued to all classroom teachers, elementary-school principals, and consultants. It was discovered, however, that attendance under this plan was unsatisfactory. The committee then asked each principal to arrange for at least one teacher representative for each preview meeting. This plan worked. The showings are scheduled at the district administration building during after-school hours.

Teachers attending previews fill out an evaluation form for each film, and at the end of the session a discussion is held on the relative value of the material viewed that day. The administrative

audio-visual committee meets periodically, studies the teachers' evaluation forms and discussion reports, and makes the final decision regarding purchase. Those films ranked highest by the previewing teachers are usually selected.

The above method of selection has been found preferable to the procedure of previewing and selecting by administrators alone. In a survey made after 14 months of operation of the film library it was found that from the group of 55 film titles which had been purchased on the basis of preview and evaluation by administrators there were 150 checkouts, while of the 48 titles purchased on teacher preview and recommendation there were 162 checkouts.

One major film purchase annually—Present practice is to use most of the full amount budgeted for films just as soon as the money is available, the titles having been agreed upon by the audio-visual committee at the close of the preceding school year after study of the teachers' evaluations of previewed films. In this way a complete list of films can be given to each teacher when school opens in September, eliminating the necessity for frequent supplements which would be necessary if small purchases were made at intervals during the school year.

Color versus black and white—A recurring problem of the audio-visual committee is the matter of choosing between color and black and white films. Despite the fact that there is no conclusive evidence that color increases the effectiveness of a film, the committee has chosen color over black and white by about a two to one margin. At the primary level, color films have been favored by a greater margin.

Promoting Effective Use of Films

Careful selection of the finest teaching materials is useless unless a means can be found to provide ready access to the materials and unless adequate facilities are available for using them.

Cataloging—To make known what films are available, each teacher is provided with two mimeographed lists. The first contains a list of titles, with running time, for each grade arranged by subject area. The second is an annotated alphabetical list of all films in the library. The two lists complement each other like this: A fourth-grade teacher needs a film on the Indians of the

Southwest, so he looks at the fourth-grade list of titles under the subject heading, social studies, and finds "The Navajo Indian." To get more information he refers to the annotated alphabetical list which gives a brief, one-paragraph description of the film.

As a further aid, the teacher may refer to a loose-leaf notebook in the school workroom which contains study guides for most of the films. Experience has shown that only a few teachers will take or can find the time to preview a film before using it. The file of study guides provides information which can substitute for the preview. A study guide is also enclosed in the can containing each film sent out for showing.

Ordering procedures—Each teacher is also provided with a brief one-page description of the procedure for ordering films. Orders may be placed by telephone or by coming in person to the library. The former method is used in almost all cases and has proved popular with teachers. The advantage of this method is that red tape is eliminated and confirmation is given at once.

Orders are received by a central office employee who devotes approximately half-time to audio-visual duties. He makes a daily afternoon delivery and pickup run to all schools. When he is out of the building making his run, film orders are received by another central office employee.

A teacher may keep a film for two days. He is responsible for having the film in the packing case and at the pickup spot on the return date.

Showing the film—Many of the problems in making effective use of films fall into this category. When a film order is confirmed, a notation is made on the school audio-visual calendar so that the projector and other equipment will be available. Many schools have organized a student projectionist club, and the teacher may use its services if he chooses.

Films are shown in classrooms, auditoriums, and in special audio-visual rooms, according to the facilities available in the school. Light control is difficult in the classrooms. Regular Venetian blinds are used with daylight screens in some of the older buildings but with unsatisfactory results. In most of the older buildings films are shown in the auditoriums, and teachers seem to agree that this plan is preferable to showings in rooms that have inadequate darkening facilities.

Courtesy of Roy O. Hinch, Euclid, Ohio

Instruction in the operation of projectors is provided.

New buildings, which lack auditoriums, pose a particular problem since the classrooms are not equipped with darkening facilities. Daylight screens are being used with poor results. Experiments with various types of blinds and draperies are being carried out in the hope that funds may eventually be provided for the purchase of such equipment. Cost estimates of darkening a room with approximately 285 square feet of window area range from about 30 cents per square foot for lightweight plastic draperies to about $1 per square foot for special audio-visual Venetian blinds.

Inservice education—Current practice is to hold one general audio-visual meeting for all teachers each year. The agenda has included a review of ordering procedures, distribution of new film

lists to teachers, and short presentations on the proper use of films, filmstrips, study prints, and the several types of equipment.

Additional inservice education is conducted during the year by audio-visual chairmen in each building and by the district coordinator. This help includes instruction in the operation of motion picture projectors, filmstrip projectors, opaque projectors, and tape recorders.

Experience has indicated that additional inservice education is needed in desirable technics for using films and filmstrips. Previewing and planning the film lesson are neglected in many instances.

Toward Better Use

After almost two years of operation, district administrators generally agree that the decision to operate a central film library was sound. One hundred and three films costing approximately $8000 have been purchased. In addition, a few have been purchased and donated by parent-teacher organizations. Teachers can obtain subjects of their choice on notice of just a few hours, if necessary. Seldom does a request remain unfulfilled for long because of a previous reservation.

Do the teachers use the films? A survey made after 14 months of library operation revealed that the films were being used at the rate of seven per classroom per year. While this figure is considered rather low, it is thought that a wider use of these materials will be encouraged by further study and implementation of the following aspects of the audio-visual program:

1. Improvement of the physical facilities for showing educational films and filmstrips with long-range goals of darkening facilities for each classroom and acquisition of additional projectors, screens, and portable stands
2. Continued additions of new films to the library and replacement of worn and obsolete prints
3. Expansion of the inservice education program to include additional aid to teachers in the proper use of audio-visual materials
4. Constant evaluation of the mechanics of film library operation, with the primary objective being to provide the best possible service to teachers
5. Further study of the advisability of central purchase and distribution of filmstrips, slides, study prints, and other materials.

Developing Audio-Visual Education in Euclid

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THE establishment of an audio-visual department has been the natural result of alert classroom teachers trying to provide better learning conditions in the classroom. "More learning in less time," the motto of the Naval Training Aids Center, has to be applied in today's crowded curriculum where teachers are taking advantage of teaching devices which can improve instruction and stimulate more effective learning. The program is described in the following pages under the topics of (a) the growth of the department, (b) the school setting for the program, (c) audio-visual equipment provided, and (d) audio-visual materials provided.

Growth of the Department

The present audio-visual department has grown from the introduction of state-sponsored films in 1938, with one motion-picture projector provided in each building. But most of the growth has been recent and part of a broad program.[1]

In 1952, the Euclid Public Schools undertook the development of 25 curriculum guides, one for each of the elementary-school grades and for the subject areas of junior and senior high school. The entire staff, working on 80 committees in a two-year study, listed the audio-visual materials and sources for each unit of study. This work served to make the teachers more conscious of audio-visual materials available.

Also, the curriculum project made it apparent that additional audio-visual facilities would have to be provided. Under the cur-

[1] At the time of writing, the program served 7947 pupils and 365 teachers in 11 buildings: one senior high school, two combined junior high and elementary schools, and eight elementary schools.

riculum director a local film library was established to supplement the 160 films secured annually from the state. For the library, teacher committees submitted evaluations from previews for a basic list of films to be purchased under an appropriation of $5000.

Upon the completion of the *Teaching Guides* in 1954, the office of curriculum director was changed to director of instruction, in charge of continued curriculum study, teacher personnel, and supervision. A supervisor of visual education was appointed whose office comes administratively within the instruction department.

Duties of Audio-Visual Supervisor

In addition to classroom supervision of the use of materials and equipment, the supervisor is responsible for providing each school with adequate equipment and maintenance. Scheduling previews and ordering, distributing, and maintaining films are part of the normal routine. Helping with school workshops, instructing in the use of equipment, conferring with other supervisors and principals, and meeting with building coordinators are other duties of the supervisor.

It was recognized early that school public relations are closely connected with the audio-visual program. Coordination of school publicity was assigned to the visual supervisor. He edits materials submitted, writes and photographs stories of outstanding activities, and submits leads for stories to the three Cleveland daily papers. School events are published in the Euclid weekly paper as regular features, many of them with front-page headlines. News items, stories, and photographs have averaged more than one complete newspaper page weekly thru the year.

Editing the monthly staff bulletin, *The Euclid Educator*, is another duty of the visual supervisor. The purpose of the bulletin is to give recognition to the staff for outstanding merit and to publicize methods and technics which teachers have found successful. This activity has opened the door of many classrooms and has stimulated a public relations consciousness. Many stories have resulted from notes or calls to "please visit our class."

Since most school criticisms and lack of support come from uninformed parents who remember only the idealized events of their school days, audio-visual methods can be used to advantage to inter-

pret activities of the modern classroom. To this end, the visual supervisor is now making a 30-minute color film of the schools in action. A narration will be added thru the use of the new magnetic sound. Background music will be dubbed in from tape recordings of the senior high-school band. The film is scheduled for all the early fall PTA meetings and will also be presented to service clubs and other civic groups.

Office and Staff

Since the duties mentioned involve considerable clerical work, a full-time secretary has been assigned to the visual supervisor. In addition to the routine telephone service and booking of films, the secretary compiles the necessary orders, types from dictation, and informs teachers about visual aids which are available.

The office is equipped with the necessary files, film cabinets, facilities for previewing films and filmstrips, an overhead projector, a movie camera, a tape recorder, and a record player.

The School Setting

An important goal of the audio-visual program, as approved by the Euclid Board of Education, is to provide the right materials and equipment at the right time. Therefore, the most effective use of audio-visual equipment and materials is within the classroom unit, without the distractions of moving, losing the environmental build-up, and interrupting other schedules. Besides, the specially equipped audio-visual room cannot be justified in a crowded school. The expense of the room alone could equip the 15 to 20 units it might serve. Since such a room in a crowded building is assigned normally to a particular class, its use results in two or more schedule changes, loss of valuable time, and general confusion. These considerations have led to experimentation in lighting control.

Program in New Schools

On an experimental basis this year one new school was equipped thruout with plastic draperies. If this proves successful, other new buildings will have such light controls in the specifications. The

architect has conferred with the audio-visual supervisor regarding window placement and electric outlets in future construction to provide for more satisfactory facilities in audio-visual education.

Modernization of Existing Buildings

In many of the older buildings the maze of pipes around windows prevents the use of any darkening device other than opaque shades. This phase of renovation is being undertaken so that within three or four years most rooms will have darkening facilities. In rooms where the windows occupy an expanse of one wall the preference is some sort of quick-pull drapery wherever possible.

Along with light control, modernization of heating and ventilating equipment is progressing with the installation of univent systems. This will eliminate the ventilation problem on warm days when draperies or shades cut off outside air thru open windows.

Audio-Visual Equipment

From the beginning of the curriculum study an audio-visual committee, composed of the building coordinators and the visual supervisor, has studied the needs of our system and made recommendations on amounts and kinds of equipment.

16 mm Projectors

In selecting 16 mm projectors, the audio-visual committee compares different makes of machines for ease of operation and suitability to our program. They then narrow the field to two machines, and dealers who can assure good service are asked for bids. Bids are accepted for replacement and addition once a year in order to get quantity discounts. Exception is made with the opening of a new school when it is equipped thruout. Altho various studies have been made for determining how many machines a school system should have, our audio-visual committee recommended a ratio of one machine for nine teachers. The addition of nine new machines this year brought our inventory to 33, a ratio which approximates one for each 11 teachers. The board of education is working toward the original recommendation since the extensive use of our present

equipment sometimes causes a teacher to miss a film. A breakdown is also a serious handicap when facilities are limited.

Scheduling a machine—Since the projectors are assigned to each building, the teacher need only sign a posted schedule to reserve a machine for a certain date and time. Buildings with more than one floor have storage rooms on each floor so that a teacher can wheel the machine on its rolling cart to his room.

Operating instruction—Nearly every elementary-school teacher is a qualified operator. In four buildings every teacher and principal has received individual instruction from the supervisor, and they have qualified 100 percent. The building coordinator also gives instruction and is available when difficulties arise. New teachers are quickly oriented by instruction from an experienced teacher, supplemented by building workshops and faculty meetings dealing with audio-visual technics. Oiling the machines, changing bulbs and belts, and other minor repairs are the duty of the coordinator. Before this method was adopted, the trouble was usually too much oil or too little.

In the junior and senior high schools the coordinators have movie-operator clubs whose members take all scheduled equipment to the classroom and operate it under the direction of the teacher. The two elementary units in the junior high schools also receive service from these clubs. Also, more than half the teachers in these schools are experienced operators.

Projectors for Filmstrips and Slides

Prior to the establishment of the audio-visual department, the different schools had purchased filmstrip projectors with building funds so that many kinds of machines are in use.

For the future, the audio-visual committee has determined that purchases shall meet the requirements of being fan-cooled, of having at least 300-watt illumination but preferably 500-watt, and of having a good optical system. Machines may be purchased without the slide attachments altho some dual models must be in each building.

The purchase of 12 new projectors this year has brought the ratio of building equipment up to one machine for each eight teachers. This is considered adequate for the present filmstrip in-

ventory in each building, but with the expansion of teaching materials the ratio will have to be decreased. This valuable teaching aid may soon become standard equipment in each classroom.

Opaque Projectors

The problem of light control has prevented extensive use of the opaque projector. As facilities for room darkening are increased, so will the demand for this flexible medium. Optical systems and lenses are being improved to give better images in a semidarkened room. Six new machines were purchased this year so that the 15 now in use are allocated one to each school, or two, if the staff numbers more than 40.

Record Players

The music and physical education supervisors have been responsible for a tremendous increase in the demand for this audio aid. Two dozen quality machines were purchased this year which brings the inventory to 120, one for each three teachers. Since the demand is not so great in the junior and senior high schools, most of these players are placed in the elementary schools where the ratio is approximately one for each two teachers.

From conferences with the music supervisor and the superintendent it was agreed that any machine considered for purchase must meet rather high standards of fidelity, be sturdy in construction, and play at three speeds but did not need to be equipped with an automatic record-changer. Every school was supplied with at least one heavy-duty model, with greater output and a larger speaker, for use in the gymnasium or the auditorium. Rolling carts and extension cords were provided with this heavier type machine.

Tape Recorders

The introduction of high-quality tape recorders has been a new experience for most of the elementary schools this year. Altho still somewhat of a novelty, already they are being used in many ways. Programs are recorded and played for other rooms and in other schools. Children have become their own critics for encouraging

improvement in speech and music. Many teachers have stated that they themselves are consciously trying to improve their own speaking.

Some classes are beginning to make use of radio programs recorded for study at the most appropriate time, and parts of records are put together for lesson continuity. The music supervisor has recorded specific rhythms and left the tape with teachers in a school for practice until she returns. A talk by a reading expert to a small group of teachers was recorded by the reading supervisor, and additional tapes were made by the audio-visual department for use by principals.

To meet the requirements for classroom use, the tape recorder must have a reasonably high fidelity, have a good speaker for playback, be sturdy, and be simple to operate. Each school unit has one machine; there are two additional machines in the high school and one in the audio-visual department. Requests have been received to make more available for next year.

Radio and Television

Very little has been done to make radio and television available for classroom use. One school, thru its PA club, keeps two students on duty during their study periods to make tape recordings of teacher-requested programs from the Cleveland FM school station. A study is being made with a view toward equipping each school with FM radios so that each one may use or record the particular programs desired. Another alternative is to expand the audio-visual department to provide the taped programs as requested.

Maintenance of Equipment

The audio-visual department is responsible for keeping all equipment in good operating condition. If trouble develops, the machine is sent to the audio-visual office with a note or telephone call stating the difficulty. Arrangements for service have been made with the dealers, and ordinary repairs are usually made within two days. A substitute is provided when extensive repairs are necessary. Ordinary replacement parts, such as bulbs, belts, and reels, are stocked by the audio-visual department and are sent upon call by interschool mail.

Preventive maintenance—During the summer months all equipment is sent out for cleaning, oiling, adjustment, and a thoro inspection. Repairs are made where found necessary to keep the equipment in efficient operating condition.

Inventory cards—A card inventory of equipment has recently been put into use. The card lists the serial number, date purchased, price, dealer, and school to which assigned. On the back is listed the date and type of service required.

Audio-Visual Materials

What the central audio-visual office supplies in teaching materials depends upon the kind and amount of equipment provided, degree of centralization, delivery services, central physical facilities, and the budget.

16 mm Films

Motion pictures form the foundation of the entire audio-visual program because they employ both the audio and visual approach to learning and bridge the gaps of time and space.

During the first eight months of 1954-55 the number of films used in classrooms totaled 3961, more than three times the 1284 used in the whole preceding year. More than 83 percent of the teachers, five out of every six, have used films in classroom instruction. If one teacher could project all the films used this year, it would require one and a half years of continuous showing, using every full school day.

Areas of greatest use have been in social studies and science, areas for which more films are produced. The lack of suitable films in mathematics causes that area to receive the least usage.

Sources of films—The local film library contains 240 prints, many in color, an inventory of approximately $15,000. From teachers' evaluations, careful selection was made to include in this basic collection a moderate coverage of all subject areas and grade levels. By arrangements with the major producers from five to 10 films are scheduled weekly for preview and evaluation for classroom use. Any teacher may request additional films from any source for consideration for purchase at the time of the next order.

Starting with the third week of school, 18 films have been supplied by the state film exchange for each three-week period thruout the year. From a state catalog in each building the teachers submit their request each spring for the following year, specifying the dates which fit best into the program. These 180 films are scheduled thru the local film library on the usual request card and are available to all teachers in the system. Some shifting has to be done in order to have each shipment contain subjects which fit into the various areas and grade levels.

Other sources of film rental include the public library which supplies about 180 prints annually thru teacher requests. Advantage is taken of the many sponsored films such as those by Ohio Bell Telephone Company. Eight to 10 titles are booked to our own library for each six-week period. Thru Modern Talking Pictures many sources are to be used next year. A schedule has been confirmed which will make six to 10 films available for varying periods of time, two to seven weeks. Also, embassies of foreign governments, the United Nations, public utilities, and transportation companies are sources of films with the only cost being that of return postage.

Keeping teachers informed—At the opening of school, each teacher receives a catalog with short summaries of all films in the library and a schedule of those from other sources. In addition to indicating the area, grade level, and running time, the catalog gives helpful hints in projector operation, how to use a classroom film, the services of the audio-visual department, and how to take advantage of teaching aids. New materials received or scheduled during the year are publicized by bulletins and are incorporated in the new catalog, which is revised each summer.

Ease of procuring—Two methods are used in booking a film, by telephone or by requisition cards supplied to each building coordinator. The card is simple, requiring only the name of the film, the date desired, the name of the teacher, and the school. Along with the film and the teaching guide, the card is returned to the teacher to fill in the space provided for evaluation and remarks. These cards are then filed alphabetically under the three categories of local library, state library, and previews. From the preview evaluations it is easy to determine which films should be considered for purchase or rent.

Checkout sheets on clipboards provide a quick method of locating a film and of indicating the date of return. In the event a film is already scheduled or is out when requested, the teacher is notified of the probable date it will be sent.

Delivery system—From the main office a light truck makes two trips daily, stopping at every school with interschool mail. The bulk of delivery and pickup items are the transfer of audio-visual materials and equipment. This convenience makes it possible for a film to be used at two different schools in one day.

Filmstrips

Because filmstrips are relatively inexpensive, they have been decentralized with separate filmstrip libraries maintained in each building. The audio-visual department is beginning to supplement these with titles used less frequently.

Each school has complete freedom in choosing titles thru the support of 10 cents per pupil and from additional building funds. Orders are placed thru the audio-visual department so that quantity discounts can be secured. A new school is allowed an additional $200 for its initial filmstrip library.

Records

Records are also decentralized, but a basic library has been suggested by the music and physical education supervisors. Most of the kindergarten rooms have their own sets of records and a record player assigned for their use.

Adequate Help for Audio-Visual Education

This review points out that teachers are keenly aware of the tremendous possibilities in audio-visual education. Our experience has been that teachers will take advantage of good teaching aids that fit into the curriculum when they are familiar with the operation of the equipment, when the materials are readily available, and when facilities can be made with a minimum of time and effort. The three-fold increase in film use in less than a year is evidence in support of these conclusions.

A Cooperative Approach to Audio-Visual Education

By EUGENE C. BALTS
Supervising Principal, Northrop School
WARREN W. ZIMMERMAN
Supervising Principal, Hawthorne School
and ROBERT J. SCHULTZ
Audio-Visual Coordinator
Rochester, Minnesota

THE elementary education program in Rochester, Minnesota, is built upon the practice of using all available staff resources. For audio-visual education this means that the coordinator of audio-visual aids works directly with the elementary-school principals, classroom teachers, and counselors in planning and coordinating the whole audio-visual program. Three aspects of our program will demonstrate the nature of this cooperation: (a) getting an educational program into the classroom, (b) ordering and scheduling materials, and (c) visiting the classrooms.

Getting an Educational Program into the Classroom

Radio is one of the tools that can be used effectively to enrich the curriculum in the classroom. During the school year the University of Minnesota station, KUOM, broadcasts a regular schedule of programs designed for classroom use. While Rochester teachers wanted to make use of these programs, they found it very difficult to get satisfactory reception with present equipment. The receiving distance was too great, and most school buildings have so much steel in them that good reception in the classroom is nearly impossible most of the time, even with an outside antenna.

These difficulties were brought up in an elementary-school principals meeting. As a result, our local radio station, KROC, was contacted to see whether a plan could be worked out for a local rebroadcast. This station readily offered to give the schools fifteen minutes daily at 1:30 p.m. as a public service.

Next the principals polled the elementary-school staff to determine which programs would be most valuable. The principals then asked the University station to give permission for rebroadcast of the most-wanted programs and to work out technical difficulties.

At the present time an engineer at the University station records the broadcasts on tapes furnished by the Rochester schools. The tapes are sent by special delivery mail from Minneapolis to Rochester. Our coordinator takes them to station KROC for broadcasting.

Materials To Go with the Program

The teachers' manuals issued by the Minnesota School of the Air are provided to the teachers who use the programs. These manuals tell about the programs to be broadcast, suggest classroom activities, and outline necessary preparations. Then our audio-visual aids coordinator sends teachers a list of all programs and the dates on which they will be rebroadcast from our local station.

The Rochester elementary-school counselors suggest teaching materials to help the classroom teacher in using the program for enrichment. For example, the elementary-school music counselor sends out material on the life and work of the composers so the teacher will have it available when music by this composer is played on the radio program. Then, at their own request, teachers may receive recordings of other compositions by the same composer.

The Program in Balance

Some of the important advantages of the rebroadcast system in use in Rochester are:

1. Teachers *can* get good reception with inexpensive radios.
2. Teachers have a choice in the selection of programs.
3. The program is made available to a larger area.
4. The teachers have another good tool for the enrichment of classroom instruction.

On the other hand, the Rochester schools have found that sometimes tapes are delayed in the mails and programs are late,

that technical difficulties at the University station can result in a tape not being made, and that certain programs of value cannot be rebroadcast free without special permission. It is not always possible to secure this permission.

Ordering and Scheduling Materials

The principal plays a key role in helping teachers take advantage of an adequate visual aids program. As a basis of operation, a minimum budget of $1 per pupil is recommended.

Principals should keep on file the many sources of films, filmstrips, and other materials for the use of the teachers. In this way teachers and principal become aware of the new aids available. When ordering, teachers should feel free to contact the audio-visual aids coordinator so that all resources at his disposal are used.

Ordering Films

The following method of ordering films and filmstrips has proved successful in Rochester. The teacher lists the name of the film, where to secure it, and the date desired, on a file card. These cards are sent to the coordinator who compiles all listings and orders them well in advance so that teachers will have them when they need them. The coordinator verifies the film order for the teacher after he receives word from the distributor that the order will be filled. If films are ordered in the spring for the following year, the teacher is more likely to be assured of receiving them when they are needed in his teaching. This yearly order can be supplemented by additional short-term orders as teachers learn of new films that become available.

In addition to the yearly verification of individual orders, the coordinator sends weekly mimeographed notices to each teacher so that he will know for sure that he is receiving the film scheduled. Also, other teachers in the system may learn about films that could be used in units they are studying. Principals can call such schools and secure the films for use by their teachers. Films and other audio-visual materials are sent from the coordinator's office to teachers by the regular school delivery. Materials are returned in the same way.

Since the coordinator returns all materials to the distributors, time is saved for teachers and principals. When one person is responsible for returning rented materials to the distributor, money can be saved on postage because there will be no duplication of packing to one address.

Building Coordinator

The principal is the chief coordinator in his building. It is his duty to:

1. Help teachers with planning their program and ordering materials
2. See that machines are in proper working order
3. See that the times for showing films do not overlap
4. See that rooms are darkened, if necessary
5. See that the place of showing is large enough for the number who wish to use it
6. Assist with the use of audio-visual materials such as tape recorder, records, and radio
7. Make minor repairs such as replacing bulb and splicing films.

A device helpful in eliminating two groups from scheduling a centralized visual-aids room at the same time is having a card or schedule sheet posted each week. In this way, teachers sign for the period that they wish to use the room and time is not wasted in going to and from the visual-aids room if it is already in use. A sign-up sheet is also valuable for scheduling equipment if it is to be used in the classroom.

Purchasing Films

Additional films and filmstrips can be purchased for your local library if all the rental money is not used. We suggest that here the principal work with the coordinator. He can arrange for representative teachers to meet under the guidance of the coordinator and preview the new films and filmstrips. After previewing, teachers can help choose those materials to be purchased. Since previewing and evaluating take considerable time, we suggest an after-school meeting that can be carried thru the dinner hour. If it can be arranged to have the evening meal where the previewing is being done, much time will be saved and teachers should be more willing to spend time conscientiously selecting materials.

Visiting the Classrooms

Every Wednesday the coordinator spends the entire day informally visiting elementary-school classes and observing what is being studied. This visitation program has several purposes: It gives the coordinator an opportunity to:

1. Study the elementary-school program in action so that he may become acquainted with the areas of study in the curriculum
2. Suggest to the teacher on the spot various films, filmstrips, and other audio-visual materials which he might be interested in previewing and using
3. Suggest the use of other audio-visual tools such as the opaque projector
4. Demonstrate good procedures if the teacher desires it.

Arranging the Visits

In all visiting, close cooperation between the coordinator and the principal is important. A call slip is placed on the bulletin board in the principal's office. Any teacher desiring a short visit by the coordinator for the purpose of consulting him on the use of materials signs up for the time which would be most convenient. In many cases, the teacher also consults with the principal. When time allows, the coordinator visits classrooms at random.

Advantages and Disadvantages

Some of the advantages of the visiting program are:

1. The visiting program brings about the opportunity for close cooperation among classroom teacher, coordinator, and principal.
2. Demonstrations of audio-visual technics can be easily arranged.
3. Checking on the condition and correct use of equipment is facilitated.
4. Light control and screen placement problems can be met cooperatively.

A disadvantage of the program is that, with nine grade schools, the coordinator's services are spread out quite thin. At the present time there is only one hour of visitation per school every two weeks. But even this small amount of time sometimes leads to another difficulty: Other units are not able to contact the coordinator for problems or spot emergencies. On the whole, the continuing contact among principal, coordinator, and classroom teacher is a strong force working in the direction of a better audio-visual program in the elementary schools.

Audio-Visual Equipment Is Material for Instruction

By LYLE E. SIVERSON
Principal
Holtville Union Elementary School
Holtville, California

WHAT was your score on the examination for the projection crew? Word passes around quickly after the intermittent examinations the boys on the projection crew are requested to take in order to hold their positions as regulars. These examinations motivate the boys to keep alert, and they also indicate that learning takes place as the boys work at the various tasks of operating and maintaining the audio-visual machines and devices in the Holtville Union Elementary School.

Audio-visual equipment is recognized for its value as an aid to instruction in the classroom. Frequently, however, the possibilities of using the equipment itself as material for instruction are overlooked. The organization and administration of a crew of student operators capitalizes on this potential of the investment in audio-visual equipment.

The following equipment is used in our school:

1. Two 16 mm projectors, one in the projection booth in the auditorium, and the other in the teaching aids room for use in the various classrooms
2. Three portable daylight screens
3. Two filmstrip and slide projectors
4. Two public address systems, one in the auditorium and the other, portable
5. One three-speed record player
6. Eight portable record players
7. One tape recorder
8. One overhead projector with a tachistoscopic attachment.

All of these devices are used by classroom teachers from the kindergarten thru Grade VIII as aids to instruction. However, the purpose of this article is not to describe their use but to indicate the value that accrues to the boys who are taught to operate and maintain this equipment.

Selection of the Crew

About 24 boys make up the regular projection crew. Only seventh- and eighth-grade boys are eligible to be regular crew members, but individual teachers are encouraged to teach other interested and reliable pupils to operate equipment in the classroom. The boys who indicate an interest to be on the projection crew are given some group instruction by the principal and the chief projectionist. Since the basic job of the crew members is to run the film projector, this first instruction centers around threading the film, operating the projector, and rewinding film. The boys are then given a chance to show what they have learned by performing these tasks under supervision.

Those who successfully pass this test are placed on a list which is circulated among the departmental teachers. Each teacher rates the pupils as individuals on dependability and over-all ability. Since being a member of the crew necessitates missing some of the scheduled classes, it is important that the pupil be able to keep up his regular school work. The top 20 pupils are selected for regular projectionist assignments, and the next four are alternates and substitutes.

Duties of Crew Members

The pupils are assigned to show films in the auditorium according to a regular schedule. Before missing any class because of projectionist duties, the pupil must secure a "release from class" slip from his teacher. It is understood that his classwork must be satisfactory to warrant the release; if it is not, the pupil is not released and an alternate is assigned. It is the responsibility of the projectionist to find out which films are to be shown and to get the films from the teaching aids room. Films are received each week from the county film library as they are ordered by the individual teachers. If the films are to be shown in the auditorium, the projectionists are responsible for lowering the electrically operated screen, adjusting the curtains and lights, switching the sound system from public address to projector, getting the projector ready with film threaded, picture focused, and sound checked, all before the class arrives for the film.

Each projectionist must sign in at the projection booth indicating the time the film was shown and the title of the film. This procedure provides a valuable, permanent record. For example, if a film is found to be rewound improperly, it can be traced to the individual who is responsible. This system aids in locating the inefficient without penalizing the conscientious pupil.

Duties of the Chief Projectionist

The chief projectionist is an eighth-grade pupil who has had a year of experience on the crew in the seventh grade. At the end of the year those boys who want to try out for chief, take individual performance tests supervised by the principal and a written examination on the use and maintenance of the equipment. Again, they are rated by their departmental teachers on dependability and ability. These factors are considered by the principal when he makes the final choice for chief projectionist.

The chief projectionist is responsible for securing substitutes when a regular crew member cannot perform. Each week he assigns a crew member to take care of maintenance which includes oiling the projectors and cleaning the lenses. He also assists in assigning crew members to show films in the classrooms.

It is his job to inventory the spare parts, bulbs, and fuses and to inform the principal when it is necessary to order such articles. In general, his responsibility is one of supervision of the operation and the maintenance of equipment.

Other Duties of Crew Members

Altho the primary task of the crew members is to act as projectionists, they are also taught to operate other pieces of audio-visual equipment.

An example of an extra duty assignment is serving at an evening PTA meeting. Two boys are assigned to set up the public address system and operate it during the program. If a film is to be shown at the meeting, student operators are assigned to that job, and two boys take charge of setting up the portable projector and showing films in a classroom where parents leave smaller children during the meeting.

Administrative policy permits school equipment to be lent to organizations in the community when a school employee is present. A student operator, however, accompanies the teacher on such occasions. Adults are generally impressed with the confidence and efficiency of these pupil operators.

Pupils also teach others to operate the equipment since a reservoir of replacements is necessary. Some boys find that they cannot keep up their classwork or they may become careless with the equipment. In such instances the pupil is relieved of his responsibility, and another is assigned in his place.

Teachers, too, are often taught by members of the projection crew. When a new tape recorder arrived this year, there were several meetings at which small groups of teachers were shown how to operate the recorder. However, use of this equipment was facilitated and encouraged by means of sending a pupil operator to the classroom with the tape recorder to set it up and demonstrate its use. Teachers were pleased to learn from the pupil, and in this way they had assistance as long as they needed it. Such a system encourages a teacher to use equipment which he might otherwise hesitate to use.

Values of the Program

Organization of such a program has several advantages for the individual and for the school.

For Members of the Crew

As far as the pupil is concerned, when he understands that other pupils and teachers are depending on him, he usually rises to the demands of the task and becomes increasingly dependable.

There are leadership opportunities for the boys. Many strive toward the goal of becoming the chief projectionist. They develop poise and confidence as they teach others and work with their peers and with adults both in and out of school.

Pupils learn to work together. They help one another when a conflict is found in the schedule. There is value in working with pupils and teachers in many situations. They learn to take orders and to give orders and the proper place for each.

Study habits are stressed. Many students will study intensely for an examination for the projection crew and get an excellent score. This performance can be used in guidance to prove to a boy what he can actually do in his classwork if he will apply himself.

Citizenship can be developed. These pupils realize that they are doing something to help their school. A pupil who is contributing toward making his school operate more effectively is likely to see other constructive things he can do to improve the school.

The importance of classwork is continually emphasized. The pupils understand that schoolwork in the classroom comes first. They cannot meet their regular schedule or be excused for a special assignment without the permission of the teacher whose class they will miss. Consequently there is a motivation to do good work in the classroom in order to maintain a position on the crew.

For the Whole School

As far as the school is concerned, the primary value is increased use of these instructional aids to teaching. When the teachers realize that they can depend on the pupil operators to take care of the details and the operation, they find they have more time for planning and can concentrate on working with their pupils.

It is time saving for the school. The problem of regular checking of the equipment can require considerable time of the person responsible. The pupils, perhaps, do a more thoro job of maintenance routine which then requires only a spot check by the adult in charge.

The organization and administration of the student projectionist program at Holtville Union Elementary School is not perfect by any means. We do feel, however, that it is an asset to the school because it benefits all pupils by providing for increased and more efficient use of audio-visual equipment in the school. It also benefits many pupils by providing experiences for learning with the equipment itself.

Interpreting the Audio-Visual Program

By KENNETH M. LANDIS
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Central Avenue School
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Ocean City, New Jersey

ALL phases of the modern school program should be explained to the public. This interpretation is especially needed for audio-visual education. A long step in this direction is arranging an audio-visual aids display and panel discussion for a regular parent-teacher association meeting. When parents and classroom teachers participate in a discussion about their mutual school problems, boys and girls benefit. The principal may initiate, direct, and moderate such a program.

Plans for the Meeting

For the purpose of explaining the program, the personnel of our Ocean City Elementary Schools, numbering 20 teachers and 600 pupils, planned to put our audio-visual aids on display. Some parents had the idea that all movies shown in the classroom were pure entertainment and that teachers used them to "kill" time. Other parents thought that field trips were a departure from good teaching. These and other misconceptions needed to be clarified. The goals of the program were: (a) to show the variety of audio-visual aids, (b) to demonstrate materials and equipment, and (c) to explain how these aids fit into classroom teaching.

Following a survey of materials and equipment, plans were laid for the presentation. A committee of teachers was selected to head the work on the following topics:

1. Displays
2. Panel Discussion
   a. Radio and Television
   b. Film and Filmstrip Projectors
   c. Opaque Projection and Lantern Slides
   d. Record Player and Tape Recorder.

Arrangement of Displays

The displays consisted of samples of all our audio-visual materials and equipment including the sometimes forgotten chalkboard. As the parents entered the building, they could see bulletin boards arranged to illustrate a story which a third grade had read in their basic reading series and a field trip of points of interest in Cape May County by a fourth grade. Just before entering the auditorium on the second floor, parents could observe many posters made by the pupils illustrating good table manners in the cafeteria.

The displays in the auditorium were divided into five categories: (a) models and specimens; (b) instructional materials in skill subjects such as flash cards, flat pictures, charts, and graphs; (c) murals and costumes; (d) maps and globes; and (e) museum items.

The back of the stage was covered with a large mural of a forest scene used in a fifth-grade play. The guides explained how the mural was made by the pupils, even to the approximate cost of the tempera paint used. The front of the stage was covered with models and specimens ranging all the way from an armadillo shell to the working model of a water pump.

One entire wall was covered with illustrations for visualizing arithmetic. A corner contained pictorial stories of school events.

Stereographs, fraction discs, maps, globes, and science kits were displayed on tables in the auditorium. As the folks were assembling before the meeting, the recorder was playing a tape of a glee club recital and an orchestra rehearsal.

Panel Discussion

The formal part of the program opened with a brief discussion of the background of a modern audio-visual program with particular emphasis upon the operation of our county audio-visual center which had been set in motion by state law four years before. The discussion traced how, thru this means, we have access to hundreds of films, filmstrips, and records each year at the small cost of 50 cents per pupil. These funds of local school districts, pooled in the county center, are matched by state funds. The

classrooms prepare a yearly list of desired materials and every fifth school day there is a pickup and delivery. Projectors and record players also can be borrowed from the center. This movement has helped teachers to use a variety of materials.

Radio and television—The first teacher on the program told how the radio programs acquaint the pupils with public personalities and how television presents learning situations, such as a visit to the zoo, a tour of a china factory, or a sculpturing lesson, which could not be duplicated in the classroom. Parents were eager for guidance in the selecting of proper programs at home.

With the cooperation of the Philadelphia Diocesan Schools, each month the Radio-Television Staff of the Philadelphia Public Schools prepares a television schedule of programs it produces. Schools can get a copy of the schedule upon request and are invited to make an evaluation of the programs given over stations WPTZ-TV and WFIL-TV.

Film and filmstrip projection—Another teacher demonstrated film and filmstrip projection. Most parents knew very little about the filmstrip and were not aware that it was used more often than the motion-picture film at the elementary-school level.

Opaque projection and lantern slides—In the third center of emphasis, a second-grade teacher showed how opaque objects, pictures, and postcards are projected on the screen. In a seashore community like Ocean City, where about 10 percent of the school population is constantly on the move, many educational materials are brought into the classroom from other communities. The opaque projector is very valuable in showing them to classes.

This teacher also showed many pupil-made lantern slides in color and explained the steps in making them. These slides brought much applause from the audience and a renewal of interest in this medium by other teachers.

Records and tapes—With records and diagrams, another panelist outlined the steps in teaching a sixth-grade class a square dance routine. This teacher also played a tape recording of the speech of some pupils who had difficulty and another recording of the speech of these same pupils after an extensive course in speech improvement. Parents were surprised to learn that teachers, too, used this technic to improve their own speech habits.

Results of the Meeting

A great deal of enthusiasm, interest, and real understanding were developed by this parading of our audio-visual program. The hundreds of teachers, parents, nonparents, and pupils present expressed amazement at the scope of the materials. Parents wanted to know how we find time to use all the equipment and materials, how they might learn to use the equipment so that the audio-visual approach could be used with adult groups, and how they might assist with the program. It was easy to see that the meeting offered something for everyone.

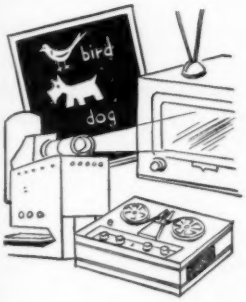
In addition to the general outcomes the teachers profited from experiences such as these:

1. They received valuable practice in arranging and explaining the audio-visual program. Everyone was involved in some way.
2. They received new ideas for using existing materials and equipment.
3. They saw the whole display which gave them a greater appreciation of using the right tool at the right time in the right way.
4. They spoke more freely to the principal, other teachers, and parents about the whole movement after this experience.

For the parents, specific outcomes were as follows:

1. They were much better informed about the audio-visual program.
2. They got some definite ideas on coordinating activities in this area at home with those in school.
3. They developed a feeling of helpfulness by seeing the need for bringing in specific materials from the community.
4. They were more willing to support the whole educational program.
5. They saw that audio-visual aids were a means of enriching the child's life and not substitutes for good teaching.

There are many ways by which an elementary-school principal and his staff can interpret the school program to the public. This meeting in cooperation with the PTA took much work but produced much good. It made a contact with the public that should serve to improve the instructional program.



CHAPTER
NINE

Some New and Some Old Friends

WIDENING the horizons of elementary-school pupils is one of the main reasons for concern with instructional materials. The available types of materials are so numerous and the ways they are put to work so demanding if results are to be achieved that the Yearbook Committee in this chapter again offers a variety in the sampling of articles.

Educational television and magnetic tape recording are among the newer mediums available to schools. Increasing numbers of schools are working with television; and the tape recorder is rapidly becoming more popular because of its versatility, simple operation, minimum maintenance, and reproduction with a high degree of fidelity.

A group of four articles suggests that there might be some value in discovering and rediscovering the possibilities of the opaque projector, the flannelboard, the newspaper, and free or inexpensive materials. Particularly in the case of free materials it is important for schools to be working on the basis of a policy that was thought out well during development.

The final article is a discussion of instructional materials for gifted pupils. This subject is important for two reasons: the application to the particular group, and the wider recognition of using instructional materials in providing for individual pupils.

Television: A Challenge to the Elementary School

By HAROLD E. WIGREN
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Houston, Texas

WHAT can be accomplished with television in our elementary schools? How can we use it to serve our purposes? What unique contributions can it make to classroom instruction? What are its future possibilities?

How we answer these questions will depend upon how we look at our roles as teachers and administrators, how we look at education, and how we look at ourselves. Television has no ideas of its own to communicate; it can only reflect us—our own creativity and resourcefulness, our own vision and perception. Herein lies the challenge which television offers every elementary-school principal and classroom teacher.

By definition, *television* means the ability to see objects at a distance. In its earlier days, television was even referred to as "the desire to see beyond," as "the urge to see afar," and as "the need to envision fully." These same meanings may be used today to describe the viewpoint of educators as they plan for the future of television in our educational programs. The educator must have "the desire to see beyond" the present and "the urge to see afar" if he would expand his thinking toward the future uses of television. He must think expectantly of the educational possibilities which television might offer not only as an instructional tool but also as a communicator of ideas, particularly to large groups of individuals.

Vision, combined with much common sense, is needed as we look at ways in which television might serve the purposes of the elementary school. Vision and common sense are not mutually exclusive. Every schoolboy recognizes this principle when he flies his kite—he anchors the kite to the ground while allowing it to roam freely thru the air. Similarly, as we dream of what television

can do for our school program, we must always tie it down to sound learning principles. On the one hand, we must never allow ourselves to be so captured by the glamour of the medium that we lose sight of all we know about learning and the ways in which learning takes place. On the other hand, we must recognize that often one must *believe* before he can *see*. We must believe that television *has* possibilities if we are ever to see what it *can* accomplish. Present indications are that television is going to make a difference in the future of education.

Guidelines for Determining Direction

In determining the direction which television should take in elementary education, two guidelines seem essential: First, whatever is done with television in the elementary school should be done in furtherance of a purpose or in response to a need. The purpose might be to bring about better communication between various levels of the instructional staff, to provide experiences for elementary classrooms which could not be provided otherwise, or to extend the use of existing instructional materials to many more groups than are now able to share them. Whatever the purpose, television offers educators an unexcelled means by which ideas might be spread to many individuals.

We must recognize, however, that like other audio-visual resources in the instructional program, television cannot do *everything*. It should be allowed to make its own unique contribution and to find its own place in the symphony of instructional materials available to the educational program. One of the surest ways to discredit it is to make wild claims of what it can do before such claims have been tested or substantiated. Unlike other audio-visual tools, however, television has the power of using all other instructional materials in communicating its message. One thing seems clear: We must act to make television serve our purposes, else we may find ourselves spending time and money on producing programs which have no real consequences either in the classroom or in the improvement of instruction.

The second guideline is: Programs should be planned from the receiving end back to the sender rather than from sender to re-

ceiver. This flow is a fundamental principle in the communication of ideas. Too many programs fail because they are planned *for* groups rather than *with* groups. To be successful, they must be planned in terms of the viewers—their needs, interests, and problems. Research shows repeatedly that one cannot safely predict from afar the needs or problems of a given group of individuals with any degree of accuracy.

How Can Television Serve the Elementary-School Program?

To answer this question, each administrator and teacher must look first at his own situation and identify those problems or concerns which are most vexing to him. Once these problems have been identified, the questions should be asked: Can television help in the solution of this problem? If so, how?

The Principal Looks at Television

Every administrator can readily identify two areas of concern wherein television might make a vital contribution, the problem of interpreting the schools to the public and the problem of the inservice education of teachers. As school enrolments increase and school districts get larger, these two problems become more urgent. Altho both are continuing concerns which will never be completely solved, new and more improved methods of meeting these needs must be sought in the technological advances of our era.

Interpreting the schools to the public—For several years school systems thruout our nation have been producing public relations programs on television. Each community must constantly evaluate the ways in which this interpretation is carried out on television and never allow its endeavors to become fixed on any one pattern. New technics and approaches to interpretation are likely to emerge if flexibility can be maintained.

For example, a new approach to this problem was "discovered" recently in Houston almost by accident when the Forum on Public Education sponsored its annual Town Meeting on Public Education. At the afternoon session, discussion groups were held on different school problems and, instead of an evening session, a symposium was held on television at which one representative of

each of the afternoon discussion sessions reported for his group. The public was invited to telephone any questions they had regarding their schools for answer on the air. The response of the television audience was so great that the telephone lines could not accommodate all the calls. The results indicated that there might be a place for a continuing series of television programs of this type which would give parents an opportunity to ask questions about the policies of operation and methods of teaching used in their schools. This experience underlines the importance of keeping alert for new and improved ways in which the school program might be interpreted to the public.

Inservice education of teachers—Perhaps the most recent innovation in the use of television to serve the needs of the elementary school may be found in the planning of inservice education programs for teachers. This use represents another approach to the battery of inservice education experiences which most schools provide for their teaching personnel. Again, television is not the *complete* answer to the inservice education task. In a very large school system, however, it does provide one of the most effective means of communication among the various staff levels of the instructional program.

To illustrate, in Houston, inservice education programs for elementary-school teachers have been conducted on television. Working with an advisory council of principals and teachers, the supervisory staff identified the areas in which teachers needed more information and guidance. Inservice telecasts were then planned around these problem areas.

Some programs have been geared to *all* the teaching personnel in the elementary schools and have taken the place of citywide meetings which in the past have been held several times each year in a large public auditorium. The topics presented on these programs have included: (a) planning a wise use of time during the school day, (b) scoring tests and interpreting test data, (c) creating a healthy environment for learning, and (d) selecting and using instructional materials in the elementary classroom. Other programs have been designed for grade level groups for viewing by teachers on one or two given grade levels; for example, a series of three programs was given on developing concepts in the teaching of third-grade arithmetic.

The telecasts have been held on alternate Monday evenings, have been voluntary, and have been one hour in length. An average of approximately 1000 teachers have viewed each telecast, and one or more programs in the series have been viewed by as many as 2000 teachers. If a "teachers meeting" with an attendance of this size had been held in a school auditorium, instead of on television, it would have been acclaimed a great success. Another point in favor of conducting "teachers meetings by television" is that teachers have not had to drive across the city after school to attend the meeting, park several blocks away, and then have difficulty seeing or hearing what took place at the meeting.

Perhaps these telecasts would have been even more effective if they had been planned to be held immediately after school so that faculty groups might have viewed them together in the library of their school and discussed the program after seeing it. The chief difficulties encountered in having such programs in the evening are twofold: (a) at home there is competition among members of the family in the use of the television receiver, and (b) there is no way to discuss what has been televised. Placing television receivers in all elementary schools would enable such programs to be produced at an after-school hour to eliminate both of these disadvantages. No longer can there be any doubt that television inservice education programs can be effective and that they present one more way in which the supervisor's arm can be extended further in helping teachers.

It is likely that inservice education programs are possible only on noncommercial educational television stations. That is one of the purposes for which such stations were originally licensed. Commercial television operations could not be expected to allot station time to such a project in view of their many network and sponsor commitments. Hence, this is another reason why every community in America that has been granted a noncommercial channel by the Federal Communications Commission should work to provide funds for getting the station into operation.

The Teacher Looks at Television

Teachers are increasingly coming to look upon television as an important instrument for learning, and are allowing it to take its

rightful place alongside other audio-visual materials and resources in the teaching-learning process. Television does not supplant the film, the filmstrip, the radio, the recording, or any other audio-visual tool; it becomes, instead, one more resource available to the classroom teacher. It becomes valuable chiefly thru the ways in which the teacher uses the television program to further the purposes which he and his pupils together have established.

Many teachers have already put television to work for them even tho they as yet have no television receivers in their classrooms. They are capitalizing on the many educational television programs which are on the air by using them as springboards for learning. It is impossible to keep television at home; it invariably comes to school as part of the experiences of every child who has access to a television set. National surveys of television viewing repeatedly show that the elementary-school pupil watches television an average of 24 hours per week. The figures in some communities are even higher. There can be little doubt that children are learning a great many worthwhile things from television viewing. Data from anecdotal records received from primary-school teachers in six of our largest elementary schools in Houston reveal that television viewing has brought about increases in information in a wide variety of topics; increases in range of vocabulary far beyond that normally expected for a given grade level; development of new skills, concepts, and attitudes, as well as gains in reasoning ability.

The resourceful teacher is not waiting until his school district is able to produce programs which he is able to use in his classroom. Thru providing opportunities at "show and tell" periods, children share with their classmates what they have learned from their television viewing. By capitalizing on this information in every area of their teaching, the teacher can make the many hours children spend in front of television receivers count for something. By discussing programs with children, the teacher can also make children more discriminating and discerning in their selection of what they choose to view on the television screen.

In thinking of ways in which he can use television in the instructional program, the teacher sometimes becomes concerned lest some day he be replaced by a master teacher who can teach hundreds of pupils at one time. He should have no such qualms.

Television will not make the teacher obsolete; it actually makes him more important than ever. The teacher is the catalyst, the integrator of television into classroom instruction. He must introduce, explain, and clarify what the pupils see, even when good television programs are available. There can be no substitute for the vital teacher-pupil relationships which a teacher with a small group of pupils can provide. Direct teaching by television, without a classroom teacher to guide the learning, would reduce the curriculum to a formal rigid pattern based on an assumption that *all* children are ready to learn at the same moment and ignoring individual differences in both rate of learning and ability to learn.

Some Unique Experiences Television Might Bring to the Classroom

Television can do some things, however, which will not only enrich classroom learning but will also make possible classroom experiences which can be provided in no other way. At this point television can make its greatest and unique contribution. What are some of these unique experiences which no other medium can provide? The following are suggestive of some of them.

Sharing Resource Persons

In every community there are numerous resource people who can be enlisted in the work of the school: people who have traveled, people with unusual occupations or hobbies, people who are visiting from other countries or other sections of our own country. Television can bring these fascinating personalities to many classrooms at one time to enrich the instructional program. Such a task would otherwise require weeks and months of personal effort and sacrifice on the part of the individual who gives his time for this service.

Acquainting Pupils with Community Resources

The community is a laboratory for learning; yet, it is impossible to take pupils on field trips into the community as often as is desirable. Television might offer some help with this problem.

Altho there are many values to be gained from an on-the-spot visit to City Hall or to some other point of historic or civic interest, television might make possible a substitute experience which might be even more valuable than the firsthand visit itself because the pupil's attention can be focused on the process he is expected to see. Television can provide opportunities for a pupil to visit *many* places during a school year, instead of the one or two places which his class is now permitted to visit.

Some of the opportunities which television might make possible are field trips to historical points in and around the community; industries which support the city's economic life; hospitals, health centers, and other community service agencies; the public library and museums; railroads, airports, and other transportation facilities; television and radio studios, newspapers, and other communication resources; and dairies and milk plants in the area. A large city-school district might, for example, by use of mobile television equipment, visit a farm and bring this experience to every primary class in the entire city. The opportunity to visit a real farm is an experience which most children in urban communities do not have and yet need. Altho sound films may be taken of some of these activities, the production costs are enormous compared with the production cost of a television program which might be viewed by countless classrooms at one time. Kinescopes could be made of such programs for permanent use and distributed to classrooms for several years to come.

Providing Close-Ups

Television provides the unique possibility of presenting demonstrations of objects or processes which are too small, too large, too cumbersome, too expensive, too rare, or too dangerous to be examined by the class or even to be taken into the classroom. These experiences can be shared with many classes who are experiencing the same difficulty.

Several universities and colleges have already experimented with the use of closed-circuit television for this purpose. Medical and dental schools use closed-circuit television to show difficult technics and operations to interns and to lay audiences wherein those who watch can see the process better than if they were on hand

in the operating room or laboratory. Chicago Teachers College has experimented successfully with the use of closed-circuit television in demonstrating certain teaching skills to students in preservice education classes.

There seems to be no end to the possibilities which television affords, for example, in observing behavior of children at play or in watching the degree of participation of children in group activities. Again, in preservice education courses and laboratory schools, skilful teachers can be observed as they work with pupils without giving either the pupils or teacher the feeling that they are being observed. Fixed-focus cameras mounted high on classroom walls above eye level but focused downward pick up the activities that go on in the class in range of the cameras. No cameramen or technicians interfere with regular classroom instruction. In fact, no one in the class is aware at what moment he is even on the air. The children are completely unaware, in most instances, that cameras are even in the room.

Providing Programs for Expanding Children's Horizons

Altho films could render many experiences of this type possible for the elementary classroom, television can give an on-the-spot quality to the experience which could not be gained from a film. It is often not possible to predict how a given television program might turn out, whether the experiment will work, whether the hamster will act as he should act, or actually what is likely to happen. In this respect the television program differs from the film version of the same topic. In viewing a film, the viewer knows, if he has previewed the film, what the outcome will always be, no matter how many times the film is shown. But not so with television. Each person who watches a live television production has the feeling that he is seeing something for the first time. Again, in the classroom both the expected and unexpected experiences are essential. It is not an "either-or" situation between the film and television. In providing the same experience, one has certain qualities which the other does not necessarily have. Philadelphia, Seattle, New York City, Baltimore, Newark, and Minneapolis have been among those school systems which have offered television programs of this type for several years with excellent results.

A word of counsel is needed here. Those responsible for the planning of television programs for in-school use will do well to ask elementary-school teachers, "What experiences can television bring to your class that you really need, experiences which you find it difficult or impossible to provide?" This will insure that programs have a real purpose and will not be remote from what is going on in the classroom.

Providing an Outlet for the Exchange of Creative Pupil Work

Television provides an unexcelled means for spreading good ideas thruout a school system. The creative work of pupils in one class can be shared via television with pupils in many other classes and in many other schools. Thus, television serves another function in the school by stimulating and encouraging creative work of pupils in drama, handicrafts, art, music, and industrial arts. This outlet provides opportunity for recognition of outstanding pupil and teacher work while at the same time improving the quality of classroom instruction.

Possible Future Uses of Television

What does the future hold for television in the elementary school? Here, again, television challenges elementary education. When we recognize that its only limitations are those which we ourselves impose, there is great temptation to throw caution to the wind and make predictions which are not only impractical but unsound. What suggestions, then, can safely be made and supported from the point of view of sound educational practice? Two or three suggestions might be considered here.

Televising Educational Films

There seems to be merit in the suggestion that television might serve as a master projector for televising basic educational films which all teachers on a given grade level may need at approximately the same time in implementing a unit of study. This use might be one solution to the problem which many audio-visual departments have in being unable to meet the large number of

requests for instructional films which weekly flood their booking offices. One print of a basic film could thus serve many schools at once. A film could be reshown on television several times within a school week to meet the time scheduling needs of many teachers. Other advantages of the master projector idea would be: (a) television receivers can be purchased on a quantity basis for little more than $125 each, approximately one-third the cost of a motion picture projector; (b) since opaque shades are not required for television viewing, any classroom could serve as a projection room; (c) no operator is required for the equipment; (d) no film can be damaged by a teacher or pupil who is not thoroly trained in operation of the equipment; (e) the television receiver can be put on a dolly and moved easily from one room to another; (f) room ventilation would no longer be a problem during a film showing; and (g) inasmuch as television does not require darkening facilities, the television program could sometimes be used with *groups* of pupils instead of always having to be used with the *entire* class.

Lest he be misunderstood, the writer is in no way suggesting that projectors be replaced by television receivers. He is a firm believer in the classroom projector and the possibilities it affords for showing films when, where, and as needed. He is simply pointing out, however, that some of the more basic film titles might be shared on television and thus encourage school districts to buy many more film titles and fewer prints of each title. There is, of course, also the possibility that once a film has been shown on television that the demand for that title might also increase.

Two major disadvantages are apparent in the televising of films for classroom use: (a) not all films are cleared for television, and (b) on those films which are cleared for television, it is also necessary to pay a fee to distributors for the privilege of showing the film on television. The usual fee amounts to approximately $25 per showing, if the school owns the film. A daily rental fee is charged, in addition to the $25, for films which the school does not own.

In making this suggestion, the writer feels that it would be wise to televise only those films which are booked heavily during specific times or seasons of the year. Some films are used extensively during the first six weeks and remain idle on film library

shelves during the remainder of the term. Still other films are used only at such times as Christmas, Thanksgiving, Easter, and other holidays. The large number of turndowns at these times of the school year tend to discourage teachers from using films in their program. Television could be enlisted to help solve this problem which faces elementary schools thruout the nation. To do this, however, educational stations are needed. Few, if any, commercial television stations could give public service time for programing of this type. Colleges and universities, as well as smaller school systems and even individual high schools, are already exploring the possibility of using closed-circuit television for this purpose. Kansas State Teachers College is among those schools which have conducted valuable research in the use of closed-circuit television for projecting audio-visual materials.

Closed-Circuit Uses

There seems to be no end to the possibilities which closed-circuit television might offer the elementary-school program in the days ahead. There are already 101 closed-circuit operations in the United States, four of which are in high schools, and the remaining 97 in colleges and universities. Undoubtedly, larger elementary schools will eventually turn to this method as a means of accomplishing more efficiently many of the tasks which need to be done. Mention has already been made in some circles of the possibility of an electronic chalkboard being built into classrooms in the elementary school of the future. The middle portion of the chalkboard would slide to one side revealing a built-in television monitor connected to a central console in the principal's office, with the possibility of feeding into classrooms several programs at one time thru different channels with the teacher having the opportunity to select from the various film offerings at a given period. This setup would operate in much the same way as does a central intercommunications system between classrooms.

The schools in Pocatello, Idaho, have already installed a closed-circuit television system which ties *all* the schools in their community together in much the same way that classrooms are wired in a single building. This plan offers an intriguing possibility for those smaller school systems which are in communities having no

educational television channel reservations or which have no means of financing a station.

Elementary schools can learn much from the closed-circuit operations which are already on the air in high schools in Schenectady, New York; Springfield, Massachusetts; Vancouver, Washington; and in Columbus, Ohio. Information is also available from colleges and universities which are conducting closed-circuit operations. Among them are Kansas State Teachers College, Pennsylvania State College, Stephens College, and Chicago Teachers College.

What can be done by means of closed-circuit television in the elementary school? Closed-circuit television has made tremendous strides in the past two-year period. No one can chart the many possibilities which certainly lie ahead. A few suggestions might, however, be made. In addition to the possibility of providing a master distribution system for showing films to classrooms, there is the intriguing idea of using television with teachers groups for previewing new films for possible purchase. Another use might be for giving instructions to pupils on how to fill out various forms, applications, and tests which are given to pupils each year.

Administrators would do well to re-examine the many things they presently attempt to do in large auditoriums in order to reach the entire student body. It might be that some of these things, including complicated instructions or explanations, might be done better on television and beamed into every classroom.

In Conclusion

This article has attempted to point up some ways in which television could be enlisted to a maximum extent in helping to accomplish the work of the school. As is true when any new development in education takes place, there is always present the temptation to adopt the new idea, almost without questioning, if it sounds economically feasible. It is well, therefore, to maintain a constructively critical attitude until the soundness of the development can be tested.

Perhaps we could also remind ourselves that what television does to us in the future will be determined by what we do to it now.

Tapes for Teaching

By ARNOLD E. LUCE
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WHEN educational radio stations began broadcasting, schools could not always coordinate their schedules with that of the station. Hence, many fine programs were "lost on the air" for want of the intended listeners. Besides, reception was not always good. These unfortunate circumstances brought about conferences which resulted in the decision to record the programs on magnetic tape and make them available to the schools when they would be needed. With an educational foundation grant from the Minnesota Mining and Manufacturing Company, Radio Station KUOM of the University in cooperation with the Minnesota Department of Education pioneered in this field. After two years of experimental work on the project, the State Legislature was convinced of the value of such a service to the schools and in 1951 voted funds to support the first state operated tape library for teaching in the United States.

Sources of Materials

Program materials were secured from the Radio Station KUOM, Cornell University, University of Michigan, Indiana University, Texas School of the Air, National Broadcasting Company, Westinghouse Electric Corporation, U. S. Office of Education, Cleveland Public Schools, and several public school systems in Minnesota. The materials contributed were valuable for teaching in some area from kindergarten thru college. At the present time the library consists of somewhat more than 3000 titles of programs.

The tapes-for-teaching idea has advanced rapidly in Minnesota and elsewhere. In four years requests for these prerecorded programs have mounted to approximately 5000 annually in this state. Thirty-two tape libraries have been started in other states with the

assistance of program materials from the Minnesota library and technical advice from the staff.

Criteria for Selecting Program Materials

In the initial stages of development the state visual and radio supervisor was responsible for selecting materials. He worked closely with the director of curriculum in the state department of education. These two persons selected materials that in their opinion were representative of the best productions of radio educators of long experience and national reputation. Further, it was determined that these materials should be judged by the classroom teachers who intended to use them. These teacher evaluations have become the basis on which materials are retained in the library.

Subjectmatter Areas Included in the Library

The library has programs on art, conservation, English, health, music, science, and social studies. Here are a few examples of programs from each area:

1. Art. The sample programs are from *Journeys in Art*, prepared by the Minneapolis Institute of Art for Grades IV, V, and VI. The programs are accompanied by cutout pictures of the subject. They are:
   a. The Hour Glass and the Clock
   b. The Gutenberg Bible
   c. The Story of Paper.

2. Conservation. The sample programs were prepared by the State Department of Conservation for Grades IV thru VIII. They are:
   a. Lodestone (the iron mines of the Mesabi)
   b. White Trails (how wild life lives in the winter)
   c. Smoke Chasers (the work of the state forest fire prevention service).

3. English, speech, and drama. The sample tapes come from a series of programs entitled *Old Tales and New* for the kindergarten thru Grade III. They are:
   a. The Very Smallest Angel
   b. Window Frosting
   c. The Ugly Duckling
   d. The Sleeping Beauty

e. Prince Fairyfoot
f. Cinderella.

4. Health. The sample programs are on health problems and are suited to upper elementary grades. They are:
   a. Safety at Home and at School
   b. The Body's Air Conditioning Device
   c. Taking Care of the Teeth
   d. Preventing Contagious Diseases.

5. Music and music appreciation. The sample tapes come from a series of programs entitled *Let's Sing* for kindergarten thru Grade III and *Adventures in Music* for Grades IV thru VIII. They are:
   a. Singing in the Rain
   b. Black Cats and Jack-O'-Lanterns
   c. Easter and Spring
   d. Fritz Kreisler—Beloved Violinist (Viennese Caprice, Liebesfreud, The Chinese Tamborine)
   e. John Philip Sousa—The March King (Washington Post March, El Capitan, and Stars and Stripes Forever)
   f. Ferde Grofe—Musical Photographer (On the Trail from the Grand Canyon Suite, and Father of Water from the Mississippi Suite)
   g. Native music of the new world is illustrated by selections of music of the American Indian, the Negro, and the cowboy.

6. Science. The sample programs are from *Let Science Tell Us* for Grades IV thru VIII. They are:
   a. It Floats (floating objects, buoyancy)
   b. At the Airport (What makes a plane fly?)
   c. Black Diamonds (coal mining)
   d. In the Deep (deep-sea diving)
   e. Time Tellers (time zones)
   f. Weatherman (predicting and making weather).

7. Social Studies. The sample programs are from the series, *Look What We Found*, designed for Grades IV thru VIII. They are:
   a. Mountains of Mail (the post office)
   b. Journey Westward (the Mormons)
   c. Flying Words (radio)
   d. Border Patrol (customs officials).

In order to secure tape duplicating service, a teacher needs only to select from the catalog the titles or code numbers of the programs he desires to use, and send tapes along with return postage to the tape recording library. The programs are recorded on his tape within 48 hours and returned to him. The duplicating service is free to the public schools of the state.

During the winter quarter of a recent school year the following numbers of requests from schools were filled:

1. Conservation	142	4. Science	162
2. English	521	5. Social Studies	140
3. Music	292		

Uses of the Tape Recorder in the Classroom

The tape recorder has very important uses such as implementing classroom instruction, making educational program recordings for class group listening, and recording for dramatics and radio programs.

Implementing Classroom Instruction

In classroom instruction the tape recorder may be used in working with individual pupils, groups of pupils, and the entire class. The work with individual pupils is self-evaluation aimed at:

1. Helping them overcome poor speech habits such as faulty pronunciation, poor choice of words, speaking too fast or too slowly, and poor inflection or accent
2. Helping them correct actual speech defects such as nasal resonance, slurring of syllables, breathiness, lisping, and stammering
3. Training them to express ideas clearly, concisely, logically, and forcefully
4. Teaching them singing and the playing of musical instruments
5. Helping them acquire the technics of effective dramatization and interest-compelling narration
6. Assisting them in setting goals by exposing them to samples of expert performance in dramatics, speech, and music.

The work with groups of pupils is aimed at the improvement of technics, and enhancing individual and group satisfactions in achievement.

The work with the whole class is aimed at:

1. Evaluation by the class group itself
2. Analysis by the teacher for evaluating his instructional technics
3. Use by supervisors to illustrate especially effective technics for the benefit of beginning teachers
4. Playback to bring absentees up to date on the work of the class
5. Recording of classroom activities to be played for pupils confined at

home or in hospitals, and such pupils in turn may record their reactions for the teacher

6. Playback for review purposes
7. Playback to show individual or group progress over a period of time.

Making Educational Program Recordings for Class Group Listening

The tape recorder is valuable for bringing certain types of programs to classrooms. Among such uses are:

1. Recording interviews by pupils with local civic leaders, visiting specialists, and visiting celebrities
2. Making off-the-air recordings of educationally worthwhile radio broadcasts for subsequent class listening when convenient and as needed for purposes of:
   a. Giving pupils access to new content material not readily available from conventional sources
   b. Giving pupils access to performances of fine music and drama by outstanding artists on the radio which would otherwise be missed because of class schedule conflicts.
3. Making recordings of educational programs produced within the local school system expressly for class group listening or for exchange with other schools.

Recording for Dramatics and Radio Programs

In dramatics the tape recorder finds its place in:

1. Making voice tests and auditions
2. Recording samples of individual pupil performance
3. Recording short and more simple types of student dramatizations of favorite scenes from literature or drama for developing appreciation
4. Recording natural and simulated sound effects for later production work
5. Recording sound commentary for filmstrips, slides, or motion pictures.

In these various types of uses one of the chief advantages of magnetic recording tape is that it can be edited easily by cutting and splicing at any point. This advantage includes the insertion of new material by means of a special splicing tape. A good splice cannot be detected when run on the playback machine.

A second advantage of using magnetic tape is that it can be recorded, played back, erased, and again recorded hundreds of times

without wearing it out. Playing back the program countless times has no appreciable effect on the quality of the reproduction. If a mistake is made during the process of making a recording, it can be erased by the flip of a switch and a new start made on that part of the production.

Some Qualities of Tapes

Some schools have purchased one tape recorder which soon finds its way to the music department where it is in almost constant use. When a second machine is acquired, it is used regularly in the language arts department. Other instructors of the school begin seeing the possibilities of such a teaching device and request a recorder for occasional use. One reason for this spreading popularity is that tape recorders have been improved sufficiently so that they are simple to operate, require little maintenance, and reproduce most sounds with a high degree of fidelity.

Tape recordings are one of the most versatile tools for teaching. The most important use of tapes at present seems to be in assisting pupils and teachers in self-analysis of their performance in productions involving sound. Thus, tape recording is not a substitute for good teaching but an important supplement that can greatly enrich the learning experiences of pupils.

Dust Off the Opaque Projector

By EARL G. HENRY
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A RECENT survey in a school staffed by an audio-visual minded faculty showed that during one week 78 films and nine filmstrips had been shown, but the opaque projector had not been used. Is your opaque projector also gathering dust?

Teachers frequently have excellent teaching aids at their disposal but fail to use them adequately because they do not realize their full potentialities. The opaque projector is such an aid.

Ways of Using the Opaque Projector

The purpose of all projectors is to project an enlarged image of some picture or object. The fundamental reasons for using each of them are the same: to motivate, to enrich, to stimulate interest, to clarify concepts, to summarize, and to review. The technics of classroom use are essentially the same. It seems appropriate, therefore, in the discussion of a specific projector, to concentrate on how it can be used best.

The uses of the opaque projector can be grouped under four headings: (a) to show specimens and objects, (b) to enlarge materials for reproduction, (c) to enlarge materials for group viewing, and (d) to show materials in sequence.

Showing Specimens and Objects

Many teachers who have used the opaque projector for showing enlarged pictures have never used it for showing objects such as stamps, butterflies, leaves, and cross sections of a dry cell. Yet, these, and many others that any teacher can think of in connection with his subject, project clearly, realistically, and in natural color on the screen. With the enlarged image in front of the class, the

teacher can point out features, knowing that all pupils can see. This type of projection is better than using a picture or slide, for children are observing the real thing. After the discussion, the object can be passed around for purposeful examination.

Children enjoy bringing in many specimens for the room museum. Some of these can be projected with the opaque projector just as they are. If they need mounting, they may be placed on cotton in a shallow box and covered with cellophane. More permanent mounts can be made with wooden frames and glass or by imbedding the specimen in plastic. Prepared specimens can be borrowed from museums and science classrooms.

It is possible to place live creatures such as worms, tadpoles, and caterpillars in shallow containers covered with transparent material. When these are projected, the entire class can see and discuss their color, means of locomotion, and other characteristics. These projections and those of chemical reactions look like motion pictures.

Group study of such instruments as a compass, a slide rule, and various meters can be centered on a projected image of the device. Certain scientific experiments, like showing the magnetic field with iron filings, can be projected too.

Enlarging Materials for Reproduction

Much use can be made of the projector in drawing enlargements. There are many times when a social studies teacher would like a large map of a certain type for class use, but it might be unavailable or expensive. By projecting the desired map onto a large piece of wrapping paper, cardboard, or oilcloth, and tracing the projected image, the map can be produced economically.

Classes can provide themselves with many inexpensive charts of parts of the human anatomy, flower structures, and insects by tracing the projection of small sketches or perhaps, the real object. Large graphs and diagrams can also be made from small ones.

In making murals and stage scenery, drawings are usually made first on standard drawing paper. These can be reproduced to any desired size and in proportion by projecting the small sketch onto large sheets of paper or even on the walls.

Enlarging Materials for Group Viewing

As indicated before, all projection devices enlarge pictures, so it is important that teachers realize for what each specific one is best adapted. The most important characteristic of the opaque projector is its versatility. Those who acquaint themselves with it will soon find many ways of adapting it to their own use. The following are a few suggestions.

For illustrating a topic—There are many times when a picture shown at the right moment can do much to motivate, enrich, stimulate, or clarify. Because a teacher can make a drawing or choose an illustration from a book, a magazine, or a file of pictures, it will usually be exactly the visual aid needed.

The picture itself may be the topic of discussion. By selecting a specific picture for projection, a teacher can design a lesson to develop such picture study skills as artistic analysis and interpretation of meanings. By mounting two pictures side by side for simultaneous projection, good reasoning and critical thinking can be developed from comparisons of good and bad, right and wrong, and before and after.

For showing a sample—The explanation of forms to be filled out, the discussion of a page of the dictionary and its use, and the study of a library index card can be simplified by magnifying a sample on the screen. Such a projection can also aid the development of skills in reading maps, graphs, charts, and blueprints. An analysis of a model outline or the steps in solving a geometric problem can help pupils understand correct procedures. A discussion of colorful book jackets, illustrations, or parts, such as the index, table of contents, and title page, can stimulate the desire to read and to use books more efficiently.

For reviewing experiences—Our classes visit museums here and in Chicago. By projecting purchased post cards of many of the exhibits in color with the opaque projector upon return to the classroom, it is possible to review what has been seen, perhaps even to learn more than time would permit at the museum. These pictures and those in many units can also be used as a test. The teacher can show the children some pictures which have been shown during the unit or which are closely related to it and have the children tell what each suggests to them.

For showing results—The reports of individuals and committees can be made much more meaningful if illustrated with pictures. If these illustrations are drawings or photographs made by the children themselves, then more learning has resulted from the project. Good experience in evaluating the work of members of the class can be gained from the analysis of their projected drawings or written work.

For staging school programs—Illustrated book reports, biographical sketches, and reports on classroom activities make good program material. Children are always interested in the work of other children, so such presentations will take on added interest if illustrated with pupil drawings.

Community singing can be greatly stimulated by projecting the words and the music. An effective way of presenting songs is to have colorful pictures or drawings illustrate some of the lines or stanzas, accompanied by a tape recording of the song.

An interesting feature of any graduation program might be the showing of pictures of the graduates at various grade levels as they progressed thru school. Another variation might be the showing of photographs of the children taking part in the various activities during the last year.

Showing Materials in Sequence

We hear so much about pupil-teacher planning and the pupil activity it will encourage. No projector offers more opportunity for such planning or so many possibilities for creative activity by both teachers and pupils than the opaque projector. Teachers can create their individual aids for each unit of study. Children can create visual materials at their own level. Thus, not only do they *look* and *learn* as they do when viewing films and filmstrips, but they *look* and *learn* and *do* as well.

One of the finest ways to stimulate pupil activity is thru a device called the opaque strip, similar in principle to the filmstrip. This opaque strip is a piece of paper seven inches wide on which are mounted a series of pictures, or pictures and writing, in a desired sequence. When completed, the strip can be drawn thru a frame placed on the tray of the projector. Such a strip has many advantages:

1. Progress from one picture to another is quick.
2. Pictures cannot get out of order.
3. The teacher can concentrate on explaining the pictures or on listening to explanations being given rather than on getting the next picture ready for projection.
4. The pupil or teacher can organize the visual material to fit his purpose exactly.

At least six variations of the strip can be developed to provide for children of various levels and abilities:

1. A series of pictures with the information already printed on them
2. A series of pictures alternated with narration written by the child
3. A series of pictures used to illustrate a talk by the child
4. A series of drawings made by the child alternated by narration written by the child
5. A series of drawings made by the child used to illustrate a talk by the child
6. A series of drawings made by the child accompanied by a tape recording made by the child.

Wear, Better than Dust

For the alert teacher and pupil, the opaque projector provides a never ending challenge to create and develop new visual aids to learning. Those who accept this challenge will be rewarded with the joys of new learning experiences and growth. They may wear out the projector, but that is much better than having it deteriorate under a coat of dust.

A Piece of Flannel and a Bit of Imagination

By ALPHA BOGGS
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FROM the very beginning, teachers have known that visualizing the concepts they hoped to teach was a surer way than telling alone. Indians used colored sand to illustrate the great truths of their culture. Early in our own country's schools teachers often used the chalkboard to present graphically what they said.

We know how well today's children, from their early days, learn from watching television. Consequently we should portray graphically the concepts education must pass on. But to compete with this latest communication medium, a teacher needs the talent of a Van Gogh plus the genius of Disney.

The Flannelboard

So let us introduce to some and recall to others the wonders of a piece of flannel and a bit of imagination. This helpful aid, commonly called a flannelboard or feltboard, can be made merely by fastening a piece of flannel, flannelette, or felt over a bulletin board, or even a board already too pinpricked to hold "neat papers." A very serviceable on-the-spot flannelboard may be made by clipping the flannel to the top of the chalkboard, letting it hang down, and securing the sides with gummed tape to keep the surface smooth. Figures may be cut from flannel, felt (old felt hats may be used), or other cloth. Paper cutouts may be made to adhere by backing them with small pieces of flannel or very fine sandpaper. Some rough papers will stick temporarily without additional backing.

Of course, flannelboards, complete with cutout figures, numerals, letters, and sheets of gummed flocked paper for backing other objects, may be bought from school supply houses. These

commercial flannelboards range in fanciness and price as do hats and shoes. The only other necessity to get untold values from this simple device is the teacher's imagination. Then the sky is the limit!

Flannelboards and the Curriculum

The flannelboard as an instructional aid is not new. Sunday-school teachers were among the first to recognize its effectiveness. Many articles glorifying this or that use have appeared in educational literature. In no way do the authors take credit for originating the suggestions that follow. Rather, they have seen so many fine and varied uses of this instructional aid during their supervisory visits, that they have tried only to gather the representative ones together and pass them along to others.

Oral Expression

For storytelling time third-grade pupils draw and cut out the story characters, and, as they tell the story, move the characters about on the flannelboard according to the action in the story. This activity is also excellent when children make characters and scenes for their original stories. Being able to handle something while talking to the group helps any speaker—remember the watch-fob twirler. Requiring a complete sentence for every move or addition on the flannelboard helps a child who is reluctant to talk to get started and to keep going to a natural conclusion. Continuity and sequence are the language elements developed by the new positions of the cutouts.

This not only works well with very young pupils but helps older ones when they give book reviews or tell their own stories. Older pupils can likewise use the same procedure when reporting on the life of some person in history or when giving the story of a bill's passage into law. When a student reports on the life cycle of an insect or flower, the flannelboard can be very helpful also. The various stages can be portrayed while being explained. So, even tho the content be science, history, or some other curriculum area, use of the flannelboard assists development of the language skill being practiced.

Reading Readiness Activities

The uses of the flannelboard for reading readiness are numerous, and besides offering variety, they are a wonderful supplement to the readiness books. Almost any of the skills developed in the books can be presented or re-emphasized in flannelgram form. Exercises to develop language facility, a meaningful vocabulary, ability to make associations or to see relationships, visual and auditory perception, and left-to-right and downward movement of the eyes are all possible. A few suggested procedures are described in the following paragraphs.

Visual perception—Place a row of similar toys, animals, or any familiar objects in a row on the flannelboard with one object differing in size, shape, color, or design. The pupil tries to discover the unlike figure and says, "This one is different because. . . ."

Arrange pairs of similar objects, forms, letters, or pictures in two columns and have the child connect the two that are alike with a piece of yarn, a fine substitute for the line that the books suggest. See Figure I.

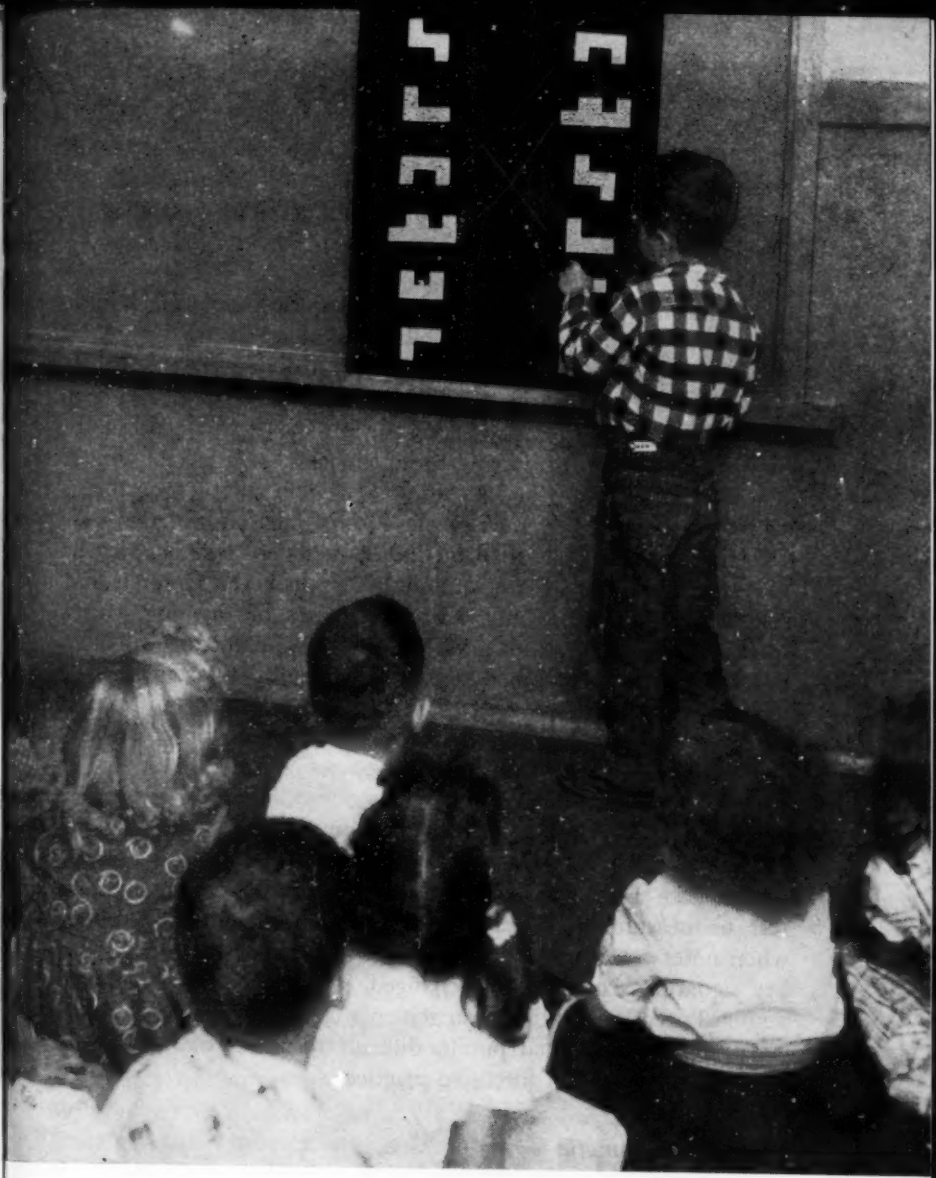
Place pictures-in-profile of any similar objects in a row with one facing the opposite direction. The child points out the one that is different. This exercise is also helpful in developing the sense of left and right direction. The pupil may say, "This one is going left" or "That one is facing right."

Auditory perception—Scatter objects beginning with the same sound on the flannelboard, plus one or two that begin with a different sound. Have a child remove those that are different from the common sound.

Place in columns or scatter about several pairs of pictures whose names rhyme. Have the child discover and indicate in some way those which rhyme.

Eye movement across and down—Place pictured objects in rows across the board. The child then "reads" the line by naming the objects from left to right with a directional piece of yarn if a second line is to be read. Placing sequence pictures gives practice in this skill, also.

Vocabulary development—Outline a toy shelf or cupboard with yarn. Direct the child to "put the doll on the *top* shelf, the ball *between* the doll and the car, the airplane on the *middle* shelf,"



J. G. Princell, Photographer, St. Louis Public Schools

The uses of the flannelboard for reading readiness are numerous, and besides offering variety, they are a wonderful supplement to the readiness books.

and so on with such words as *below, above, beside, over, under, to the right of,* and *to the left of.* This activity also gives training in following directions. Opportunities for developing meaningful vocabulary thru this medium are as limitless as the teacher's ingenuity.

Making associations—Prepare cutouts of fruits and vegetables, a bowl, and a basket. A child takes an orange from the board, places it in the bowl and says, "This is an orange. It is a fruit." Another puts a potato in the basket and says, "This is a potato. It is a vegetable." The same procedure may be used with farm and zoo animals which fly and those which swim. Rows of similar objects with one which does not belong and pictures of things which go together help develop the idea of relationship.

Many of the objects used on the flannelboard will have to be prepared by the teacher. In some instances, however, children may select from magazines and cut out pictures of rhyming words, of beginning sounds, and of similar things. The cutting will help develop muscular coordination as well as furnish the props for the next readiness activity.

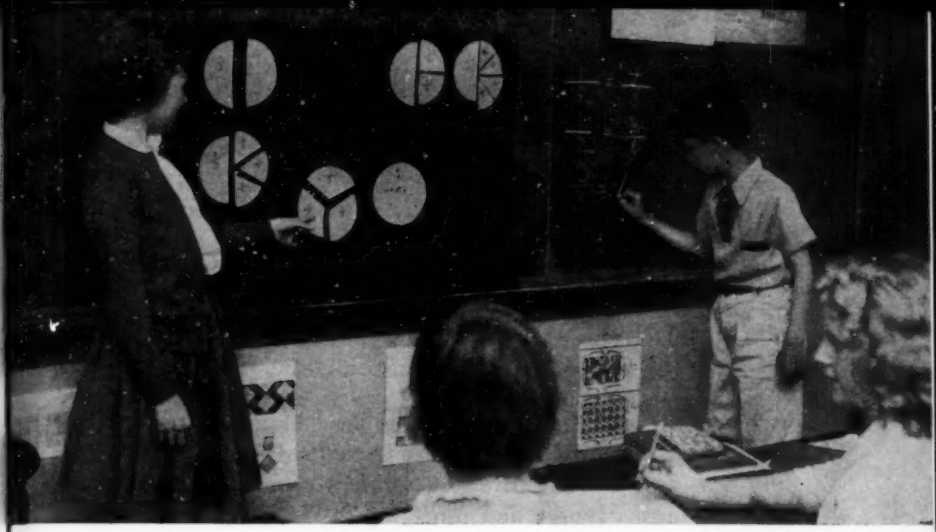
Learning Music

Instead of having the staff chalked on the chalkboard, having one permanently fixed on a piece of flannel has some very obvious advantages—pieces can be removed for every correction of note, rest, or measure bar. Music lessons can take on some added aura when notes can be placed by pupils to show tonal patterns. Also, key signatures can be easily changed, scale sequences effectively demonstrated, and choral arrangements changed quickly.

With more advanced pupils, difficult measures or motifs can be easily displayed for intensive practice.

Learning Arithmetic

Colorful felt pies and fractional pieces help with the understanding of fractions and are considerably easier to manipulate than drawing around a pie plate or using the chalkboard compass. See Figure II. Many other basic understandings, too, are made clearer with the flannelboard serving as the visual proving ground.



J. G. Princell, Photographer, St. Louis Public Schools

Colorful felt pies help with understanding fractions.

For instance, "seeing" that one square foot is really composed of 144 square inches helps in the understanding of area. Construction of specific geometric shapes with pieces of yarn, or graphs with felt figures having certain values, and proof of certain facts regarding angle values are some definite instances in the middle- and upper-grade arithmetic where the flannelboard can prove its worth.

It is likewise an invaluable aid in helping children understand the simple addition and subtraction facts, the basic 10's of our number system, and the resulting problems when borrowing in subtraction and carrying in addition are encountered.

A Summary of Values

A piece of flannel used with a bit of imagination has these values: (a) its mobility permits placement for small group instruction and wherever light is best; (b) it has a magic quality that appeals to children; (c) it permits much manipulation, a decided attraction to children; (d) production of movable parts challenges creativity of students; (e) it gives re-emphasis to book presentation but in a slightly different form; (f) it is an aid in most content areas; and (g) it is an inexpensive instructional material.

The Newspaper—A Rich Resource

By BRYAN J. MOSHER
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THE daily newspaper is one of the most important mediums of keeping us up to date on current events. It tells us about people near and far and covers most areas of interest: economics, politics, music, sports, and other topics. The vast wealth of information contained in a newspaper makes it an excellent resource for teaching. Most of us are aware of its usefulness with high-school students, but how many recognize the possibilities for use with the children in the intermediate grades. At this level, children should begin learning to read and understand the newspaper.

In our sixth-grade class we decided to combine learning to read the newspaper as a worthwhile activity in itself with using information from the newspaper for other learning experiences. The newspaper is a treasure chest of material that can be used to make learning meaningful to the pupil. This article illustrates some of the things that can be done with the newspaper as the basis for instruction.

How To Read the Newspaper

We began by discussing characteristics of the newspaper, the make-up into sections, the types of information, and the appeal of certain sections to certain people. We thought that most people would be interested in the front page because it carries the news of immediate interest. Our discussion of the use of the main headline showed that it is actually the caption for the most newsworthy item of the day.

Probably the most important phase of newspaper reading is interpreting the news. Knowing about the cultures of the different societies in the world is a definite must for children in our schools. The intelligent interpretation of the news is also important in other

areas of our society: labor and management differences, liberalism and conservatism, pros and cons of legislative bills, and other areas of living.

By discussing the news on such topics, the children soon develop power to form their own ideas and opinions about current issues. We believe that it is imperative for the maintenance of our democracy for people to retain the right to form their own opinions based on authentic information, to think for themselves, and to voice their arguments either for or against important issues —freedom of expression is vital to our society.

The Newspaper in Subjectmatter Areas

In addition to its fundamental uses, the newspaper may serve the classroom in other ways. Our most extended use was in setting up lessons in subjectmatter areas.

In Arithmetic

The newspaper presents much material for teaching arithmetic. On many occasions our complete lesson came from the newspaper with advertising being the main source.

In order to stay within the experience of the children, we compiled a list of articles that the children themselves usually bought at the store. Then the problems were based on this list. Most of the items were small and relatively inexpensive: bread, milk, butter, crackers, cookies, soap, and small quantities of meats. Sometimes we branched into other things such as furniture, automobiles, and toys. We also discovered that material for arithmetic is not restricted to the advertisements, but that many interesting articles which show distances, quantities, or figures can be put to good use in the classroom.

In Social Studies

A wealth of social studies material is available to the children from the newspaper. Each day there are numerous pictures and articles about many of the different areas of the world.

For a project in social studies each of the children kept a scrapbook of some country or area of the world in which he was interested. They cut out maps, articles, graphs, and pictures which became supplemental material when we studied certain countries in the regular social studies course. An important quality of the scrapbooks made from these clippings was that they were the most up-to-date materials we had.

In Science

Science is another area where the newspaper abounds with material. A day seldom goes by that the newspaper does not have an article on some phase of science. Such words as *atomic power, electronic brain, jet propulsion,* and *rocket* are becoming a part of the child's vocabulary. It is important, therefore, that the teacher help him to understand what the terms in these articles mean and the important part scientific discoveries and inventions may play in his life.

We set up a science corner in the room with a bulletin board and a table as facilities. The pupils cut out articles of a scientific nature and tacked them on the board for all to read. If anyone had a concrete example of something that had been discussed in class or that had appeared in an article in the newspaper or that he just thought was interesting scientifically, he brought it in and placed it on the table for all to inspect.

After reading an article about telling the age of a tree by the rings in its trunk, one boy brought in a cross section of a tree trunk for everyone to count the rings. He also looked up additional information and wrote a short paragraph for the exhibit which helped the others to know what to look for in the wood. At various times our corner had such articles as turtles, mice, ants, seeds, leaves, bark, and fossils.

For our unit on weather, the weather map and report in the newspaper were a source of valuable information. Before long, such terms as *isobars, isotherms, highs, lows, fronts,* and other expressions had meaning for the children. Each day we attempted to predict the weather for the following day. We also tried our hand at long-range forecasting with reasonably accurate results.

In Language Arts

The newspaper also affords opportunities for practicing the language arts. When the children read the various articles in the newspaper, they underlined with a red pencil the words which were new to them. Then, they copied these words into a small notebook and looked them up in a dictionary for pronunciation and meaning. These lists increased the pupils' word power. At times we played a game, using the words the children had collected in their notebooks. Each child had a turn, using his own notebook and asking the others to spell words and to give the meanings of them. If a word was new to a child, he in turn added it to his notebook to be looked up and studied.

The newspaper is an excellent source of information for reports. If a topic of class interest was in the news, but perhaps rather lengthy or spread out over a few days, some children were assigned to read all of the article and to condense it into a short report to be read later to the class. We then discussed the relative merits of each report, based on what a good report should be.

For holidays, stories and poems are published in the paper which can be acted out in the classroom or can be correlated easily with art or other subjects. Also, articles can be read orally by the pupils, recorded on tape, and then played back for helping the children with speech improvement.

We had lessons in letter writing, too. We wrote to several air and steamship lines requesting information about foreign countries. Not only did this procedure provide practice in writing, it also helped us in social studies.

Eye on the Goal

The newspaper today offers valuable teaching material that no teacher should overlook, whether he be a high-school or an elementary-school teacher. It is an integral part of our society and helps to shape our opinions on many subjects. Therefore, children should be taught how to use the newspaper skilfully. This teaching may begin in the intermediate grades of the elementary school and continue thru high school. Thus, the newspaper may help us to become well-informed citizens.

Obtaining and Using Free Materials

By ROBERT H. SHERIDAN
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La Mesa, California

THE classroom teacher of today has many sources to draw upon to teach a lesson. We have come a long way from the time when the chalkboard and the map case were the only outside sources to help explain the concepts underlying a particular lesson.

The impact of audio-visual instruction has been felt in about every school in America. The larger school systems with greater resources have set up their own instructional materials departments, headed by a director and staffed with artists, photographers, repairmen, and other personnel. These districts are able to buy or produce most of the visual aids they need.

On the other hand, the smaller districts on a more limited budget have joined county units to get more for their money. Every day teachers in these small districts meet the two main determiners of the use of audio-visual aids, availability and cost. Perhaps teachers in these small schools can find in this article some answers to the frustrating experience of trying to teach by a research approach but with limited material.

Availability of Material

Fortunately, industries have found that teachers will use their attractive pamphlets, charts, and maps of their special processes. In trying to determine what was available, Gordon Salisbury, another teacher, and I contacted over 2000 different organizations, companies, and governmental departments in the United States with a request for samples. Because of the vast amount of material we received, we decided to list only those items that were free and could be kept by the teacher. This resulted in eliminating free films, of which there were a large number, and also the material for which a small charge was made. The results were amazing:

1. Of the 2000 organizations contacted, over 800 had free instructional materials which, when evaluated, proved to be acceptable.
2. The number of individual aids was over 2000, as many of the organizations provided a variety of materials.
3. The materials provided to teachers were: actual samples, specially constructed cutaway models, pictures, posters, maps, charts, free filmstrips, booklets, demonstration units, comic books.
4. The subjectmatter of the materials was practically unlimited. It ranged from detailed descriptions of processes, such as how oil is discovered, drilled, refined, and put on the market, to complete general coverage of topics such as health and information on foreign countries.
5. The reading level of these materials ranged in difficulty from first grade thru college.
6. Organizations willingly provided these materials free to teachers, and some would send their material to the pupils in classroom quantities.
7. Generally the better materials had very little advertising on them.

Evaluation of Material

When we received this vast amount of material (somewhere in the neighborhood of 10,000 items), it became obvious that certain criteria had to be set up to select those items that appeared to be most useful in the classroom. Some of the criteria used were:

1. The material must be free and nonreturnable.
2. The material should have no advertising or the advertising must not make the material undesirable. (When the materials carried too much advertising, we suggested to the company that it revise the materials into a more desirable form.)
3. The propaganda-type material was excluded. This material generally came from information services of some foreign countries. (If any material seemed to present only one side of an issue, we included materials presenting the other points of view so that classroom teachers could be informed on all opinions regarding the issue.)
4. The information must be accurate and in keeping with good educational practice.
5. The material must contain enough valuable information to justify the pupil requesting it.

Using Free Material as a Letter-Writing Activity

When the problem of where to get material for a social studies unit came up recently in class, the writer felt this was the op-

portunity to teach letter writing in a meaningful manner. The class was informed about the sources of available information. There was an enthusiastic response to the idea that one would receive informative material by merely sending a request.

Some of the items pupils in years past had received were shown to the class. These items were examined for possible use in the study of the unit and the pupils thought of many ways to use the material, among which were: (a) giving oral and written reports, (b) making a display of appropriate posters, and (c) making a bulletin board.

After the material was presented, nearly everyone in the class wanted to write and mail a letter the same day. The class discussed the writing of business letters, read the lesson in the language book about writing letters, and worked on getting their thoughts on paper. Some of the pupils found that their letters had to be rewritten because of illegible handwriting. It was explained to these pupils that, if they expected to get the item they asked for, the person receiving the letter must be able *to read* their writing. Some of the pupils had to refer to their dictionaries to correct misspelled words. A variety of questions came up which led into many language activities.

Only a few pupils had completed their letters by the end of the first day, had them signed by the teacher, and ready to be mailed.

The signing of the letters by the teacher is important. In a spot check we found that the response to letters signed only by pupils was about 45 percent, while to letters countersigned by the teacher and carrying the school for the return address, the response was nearly 100 percent. One reason for the increased response is that companies receiving letters from children, countersigned by the teacher, are reasonably sure that the material will be used in the classroom.

As the days passed, more letters were finished and mailed. Then the first packages arrived! The class buzzed with excitement. Curiosity shone in the eyes of the other children as each pupil opened his package and showed the contents. The material was passed around and examined by the class members. As the idea caught on, a few of the pupils who had not finished their letters pulled crumpled pieces of paper from their desks and glanced over the sheets, trying again to complete them for mailing.

After the first response, as many as 10 to 15 letters were mailed each day. The pupils were anticipating future needs and writing for material for the next social studies unit, the next science unit, or the next health unit. Children who apparently had never written letters before were asking for names and addresses of places and were eager to send for free material.

Experiences Gained from This Activity

The experiences gained by children of the La Mesa, California, school district thru this activity were real and exciting. The free material is used over and over, not only in their schoolwork but also in activities at home. One girl received a puppy as a birthday present and wrote for material on how to care for dogs. A boy who owned rabbits wrote for information about their care and feeding. These are just two examples of many that occurred during the school year. Among the specific experiences children had are:

1. Experience in using alphabetical listing and cross-referencing
2. Experience in writing a neat, correct business letter
3. Experience in correctly addressing and mailing letters
4. Experience in making the writing of a business letter a meaningful activity
5. Experience in writing or giving orally a report which otherwise might have been impossible because of lack of information
6. Experience in gaining status and recognition by presenting a report to the class.

To avoid killing the supply, a system of checking should be set up to determine that only one pupil in a class writes to a particular organization. This will avoid duplication of requests from the same classroom.

Instructional Materials for Gifted Children

By NATHAN KRAVETZ
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Sheridan Street School
Los Angeles, California

FOR the bright child, the city is a laboratory; the library is his browsing room; the school is his workshop; and the classroom teacher is his journey's companion.

At the Sheridan Street School, a special work group of high achievers was organized. This group of youngsters met to extend their knowledge and abilities in areas for which there was little time or opportunity in the regular classrooms. They met with the principal, the school nurse, and with other specialized personnel as the needs arose. And as opportunity permitted, they explored topics, which they chose themselves, ranging from astronomy, ancient Egypt, and prehistoric life, to modern diet, nutrition, and health heroes.

Materials in Different Fields

Since the school resources were typical, rather than ideal, instructional materials used fell short in type and in quantity of what these gifted children needed. Working with them, the principal attempted to determine the varieties of instructional materials suitable and necessary in the different fields of study. Obviously, the needs of gifted children are basically those of all children in our schools. It is, however, toward enrichment, extension of interest, and creativity, that the full potential of such children is to be channeled.

The Language Arts

Gifted children should be aided in expressing and communicating their thoughts and impressions. Ideas may be scientific, poetic, dramatic, literary, civic, or journalistic. Yet, those who may have much to communicate may lack basic experience for effective ex-

pression. This basic experience requires opportunity, guidance, and materials such as the following:

1. A typewriter
2. A simple duplicating machine
3. A radio-phonograph
4. A tape recorder
5. A thesaurus
6. An unabridged dictionary
7. Simple English, French, German, and Spanish dictionaries
8. *Robert's Rules of Order Revised*
9. An atlas
10. An almanac
11. An encyclopedia
12. Puppets or puppet-making materials.

The school or classroom library should contain current anthologies of literary, scientific, and historical materials, but this collection should not rival that of the public library. Rather, the trail should be blazed in the school which will lead these young explorers to the public library for its more specialized reference materials and its wider variety of books and periodicals. Library services are increasingly expanding and often include audio-visual materials which may be available for school use.

The Graphic Arts

Even tho the creativity of gifted children may be impeded by their own strong interest and preoccupation with reading, the availability of materials plus a "critical" amount of motivation can yield creative expression of current and potential importance. The following graphic arts materials should be available:

1. Paints: water colors, tempera, poster, and oils
2. Charcoal
3. Clay: glazes, plaster of Paris, clay tools, prepared and powdered clay, and kiln
4. Silk screen materials and inks
5. Colored pencils, crayons, and poster inks
6. Linoleum blocks and tools for carving
7. Pipe cleaners
8. Crepe paper and tissue paper in various colors
9. String, wire, and lead weights
10. Tools for use in working with wood, leather, and textiles.

The use of artistic materials in the classroom serves as a stimulant to artistic expression and appreciation. Well-selected prints in suitable frames, textiles, models, statuettes, and mobiles will enhance the general atmosphere and will stimulate creativity in the graphic arts.

Science

Teachers of gifted youngsters are acutely aware of the tendency of many of these boys and girls toward scientific investigation. Materials in the classroom will deepen such interests and will lead toward greater personal growth. Recommended scientific materials would include:

1. Magnets
2. Soldering iron
3. Bunsen burner or its equivalent
4. Scales
5. An electrical kit containing batteries, buzzers, wire, insulators, coils, transformers, headphones, switches, and similar items
6. Microscope
7. Specimen mounts and slides
8. Test tubes, glassware, and other utensils
9. Basic chemicals for biological and chemical studies
10. Pulleys and weights
11. Aquarium
12. Sand table
13. Screening for cages
14. Photographic equipment and supplies
15. Simple steam engine
16. Thermometer
17. Barometer
18. Celestial globe
19. Astronomical charts
20. Lenses and prisms
21. Tuning forks
22. Tubing: glass and rubber
23. Field guides and science manuals.

An important asset to the development of science experiences is the community and its resources. The public library is a mine of material; and museums, both general and specialized, are an extension of the classroom.

Mathematics

As with science, gifted children frequently show aptitude for mathematics in its historical, quantitative, and abstract conceptions. Experiences should be offered with a variety of materials such as the following:

1. Abacus
2. Compass
3. Protractor
4. Solid forms: sphere, cube, prism, and similar items
5. Measuring instruments: linear, volume, and those as in science
6. Simple adding machine.

In exploring the realm of mathematics, such materials as graph paper, "magic squares," and collections of mathematical games are highly motivating to rapid learners.

Music

Music in both its passive and active aspects should be among the experiences of gifted children. They are interested in the abstract, as well as in the more dramatic and programed types of music. Further, the gifted frequently show facility and interest in performance and in composition. Opportunities for a variety of experiences can be offered thru such materials as the following:

1. Piano
2. Autoharp
3. Rhythm instruments: song bells, drums, sticks, etc.
4. Recorders for individual use
5. A balanced collection of phonograph records
6. Songbooks for community singing and chorus
7. Picture charts of instruments and orchestra
8. Radio-phonograph.

As in most other subject areas, community resources provide important materials for child growth in music. Children should be encouraged to attend musical performances in the community.

Books in General

The current caricature of the gifted child is a studious bookworm, bowed by his burden, and eternally reading. As with most

caricatures, this one has a grain of truth in it. The accumulation of knowledge is available primarily and most efficiently in books and other publications. For the gifted, such sources are indispensable. Their interests in history, literature, biography, and languages deserve to be well nurtured. In all the areas discussed, the place of books in the classroom is unquestioned. But the seeking should go outward to the library, to collections, and, whenever possible, to primary sources.

Materials of Most Worth

Instructional materials for gifted children should be basically those for the average child, but they should also lead to the development of more abstract concepts and to wider learning. Such materials should promote the fulfilment of pupil potential in areas not generally included in the regular school curriculum, and they should provide the child with new experiences and opportunities to work with a variety of mediums. The child should be challenged by his use of such materials and thereby move on to better understanding and to abstract concepts.

The materials should be adaptable to various uses within the school and should be nonlimiting in character or design. They should be useful themselves in the production and development of additional materials for further growth of the pupils; their quality should be consistent with the uses to which they are put, and they should meet high standards in terms of replacement, repair, and safety.

The materials of most worth are the understanding classroom teacher and the elementary-school principal who can bridge the gap between knowledge and practice thru good materials well used, who are aware of the needs of gifted children, and who are devoted to their cause.

CHAPTER
TEN

Inservice Education of the Staff

ELEMENTARY-SCHOOL principals are concerned with helping school staffs achieve greater competence in the use of instructional materials. There are many ways of providing such inservice education. Increasingly, faculties, working together, plan the steps they wish to take in terms of the program of the school. It is realized that the methods of inservice education do not generally apply exclusively to using instructional materials, but they provide the emphasis for this chapter.

Some stimulation can come from outside the school staff. The problem is to find ways of employing these outside sources to full advantage. The opening article, a dialog, is on consultant help. As you read along, you can easily find the guidelines for a place to begin, for signs that the faculty wants help, and for the kind of qualities a consultant should have.

In the other five articles, three authors approach inservice education from the standpoint of a single school, and two of them approach the problem on a systemwide basis. You may not always agree that boards of education are assuming sufficient responsibility for supporting instructional materials programs, but that issue cannot be resolved within these pages. There are suggestions in the various articles that may spur other staffs on to worthwhile experiences.

Conditions for Seeking Consultant Help

By RICHARD L. HENDERSON
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Agnes Scott College and Emory University
Emory University, Georgia

PRINCIPAL James closed the door of his office, paused a moment in thought, then returned to his chair and swung around to face his visitor, saying, "Ed, I've asked you to come by because I think something has happened here at Manson, and I need your help and advice."

Dr. Mailer, professor at Valley Teachers College, smiled and nodded. "Valley Teachers is at your service, Bill. That is, unless the boiler's blown up! What's the story?"

Bill James handed Ed Mailer a sheet of paper. Then began a conversation which went something like this:

JAMES. Here are the minutes of Monday's faculty meeting. It was a dilly. We started out with the usual routine stuff—I've tried a dozen ways to spark up meetings, but somehow I never have been able to get at the real concerns of teachers. Well, anyway, I noticed Mrs. Carter and several others fidgeting around and exchanging excited whispers during announcement time. I thought nothing of it at first and ignored the whole thing, but finally they drew so much attention that I had to face the matter. With a smile, tho, Ed! I've learned not to take myself too seriously! So I said, "What's the gossip, girls?" And then the storm broke! I had no worries about a dull meeting from then on.

MAILER. You've got me anxious! What next?

JAMES. Well, what they were upset by—and they were really stirred up—was the special report they all had to fill out this week. Don't get me wrong, Ed. I don't blame them. This report business is getting out of hand: special reports, registers, monthly accounting, letters to parents, extra-study notices, special fund accounts. It's worse, by far, than even last year! So I encouraged them to let off steam, and in no time at all, nearly everybody in the room was

sounding off about all the routine they have to take care of, and no time to teach or work with kids. It was a real go-around, with me in the middle. Talk about a lively meeting!

MAILER. You were smart to have it out. No doubt about that. What makes you think it's the beginning of something?

JAMES. Ed, I just have a hunch that something more than mere reports is bothering these folks. Something a lot deeper.

MAILER. The reports aren't the real trouble?

JAMES. Right. I think the report business just touched off something deeper, but I'm not sure what. Maybe it's lack of time to teach. But maybe it's bad morale. Maybe it's discipline, or trouble with parents. Maybe it's—me!

MAILER. Could be one of these, Bill. Could be all of them. Could be something even more fundamental, too.

JAMES. Like what?

MAILER. This is starting to fly before we've even taken off, Bill, but it could be a kind of educational myopia. I mean that sometimes we tend to lose sight of what we're trying to do in the school business, and when we do, even the necessary routine loses its meaning. Maybe *this* has happened.

JAMES. That's very likely. At any rate, look at the whole thing in this way: Here's a fisherman who's been throwing in his hook without a nibble for three years. That's me. One day he drops the hook, and wham! Eighteen beauties strike all at once! The poor guy is so dumbfounded that he can't move. I'm that guy, and I want those fish. I won't land them by just sitting and waiting. So how can I start with this fuss about reports and get at what's really bothering these teachers? How can I lead them from reports into something bigger, some concern about our whole instructional program? This is what I've been after for a long time, and to me, this is a big chance to land lots of fish!

MAILER. I'm with you on that. What ideas do you have?

JAMES. O. K. Here's the picture as I see it, one-two-three. It's nothing new, but it's pretty important to keep in mind. Tell me

what you think. First, I've got to lead my teachers to focus on whatever the real problem is. We've just agreed that often the apparent gripes aren't the real problems; they are just "whipping boys." We've got to find the real problem. Next, I've got to stimulate them enough to want to work away on the problem. And finally, I've got to work around to the idea of getting help from somebody outside the family, some consultant, some expert—call him what you like.

MAILER. What you say makes sense to me. I'd like to add a couple of warnings, then react generally to your third idea about outside help. About the warnings: You and I both know that teachers have got to work on problems real to them. We've both admitted this. Philosophy is fine to end up a battle with, but not so good for a beginning. Also, teachers won't work on problems unless they have chances to make worthwhile contributions. The problem has to be the kind that's within the power of teachers to handle. Let's say it has to be a "beatable" problem.

JAMES. I thoroly agree.

MAILER. Finally, talk is fine, but it has to wind up in some kind of action. Something has to *happen* as a result of work on a problem. And I don't mean just a typed report, either! Now about your idea of outside help. Were you by any chance thinking of help from Valley Teachers, Bill?

JAMES. I was. For a number of reasons obvious to us both.

MAILER. All right. Let me say that I'm ready, and our staff is ready, to give whatever help we can. But there are at least three things you've got to face up to before anyone comes in on the case! First, you've got to make sure your teachers feel the need for outside help. This is vital. Otherwise, there is sure to be some resentment toward the experts, as you put it. Even if there weren't, teachers wouldn't know how to work well with them simply because they could see no need for them. Perhaps at first you won't need help anyway. Lots of things have to be thought thru and refined, so that the need for consultant advice won't be felt for several days, or even weeks. Perhaps never! Second, it's important for your folks to know quite precisely what you want to do. This means, as you said, finding out

what lies beneath the concern with reports. It means pinpointing the problem. Is it bad morale, and why? Is it lack of time to teach? What is it, exactly?

JAMES. You're right, but it's going to be ticklish!

MAILER. No question about it. However, Bill, nailing down the real problem doesn't mean that you can't switch horses in midstream. A study program needs to be flexible enough to allow for new goals as new ideas come and new facts are uncovered. Many a program begins with one purpose and winds up by solving an entirely different, if related, problem! Now finally, and most important, if you and your teachers find you need outside help, you have to decide what kind of help you want, and what people. Maybe Valley Teachers isn't the place to get help. It's possible that there are people in your own system who could serve you better, capable and well-liked folks who might be more acceptable and, so, more useful. It would be a mistake for you and me to make this decision. That's up to your teachers.

JAMES. You're right there! It's important above all to give our own people the choice of direction and assistance.

MAILER. To protect yourself and your staff, Bill, I would insist that whoever comes in know your community thoroly. Whatever actions are finally taken must relate to the life of this area, and a stranger would be laboring under a real handicap in this respect. Also, your consultant must be the kind who can accept those he works with, and by acceptance, I mean taking people and their problems seriously. Teachers resent a patronizing attitude. Life is too short to spend time with windbags or impatient experts. More than this, I think whoever comes in ought to prepare carefully for the experience by meeting with you folks, getting to know you, getting the feel of the way you think and work, and learning a lot about the kids and their ways, their hopes and fears. He ought to be one of you by the time action starts. Does all this make sense, Bill?

JAMES. Just keep going, Ed. I have it all down here!

MAILER. You've wound me up, boy. So you'll have to stop me when you've had enough! I've always felt, Bill, that the work of con-

sultants involves far more than just helping to solve the immediate problems. Don't misunderstand me. I'm not discounting the importance of little things. Teaching happiness is often made up of little successes. But teachers, like other people, tend to forget the bigger issues in the rush of daily living. And it's here that I think the consultant can give real service beyond his more "practical" help.

JAMES. You've put your finger on something there, Ed. Not many of us look straight ahead these days. We've glued our eyes to our desks, and that's wrong!

MAILER. It could be tragic! So the consultant must seek constantly to relate the small, everyday problems to the bigger, long-range problems faced by our whole society. This is not a simple job, but it's vital. And I've about talked myself out. Before we knock off for the day, could we take a quick look at some of the administrative aspects of this business, and then pull things together by jotting down some "next steps?"

JAMES. You've opened a lot of doors for me this afternoon, Ed. I have a feeling that this thing is going to snowball into something terrifically worthwhile. About my responsibilities: I do know that, if teachers are to work together effectively, they have to have several real assurances. For instance, they need my support, and the support of the board and of the community. They have to feel that people are with them, interested in them, and supporting them. They need the freedom to experiment, and time to spend in tackling the problem. And probably most important, they have to feel that people will go along with the solutions they propose. *Talk* has got to result in *action*. How about this?

MAILER. Unless I'm mistaken, you can and will give these assurances, Bill. Now, what about next steps? Do you think enough of your teachers are interested in getting started on something?

JAMES. I know that all but three pitched in at faculty meeting, and I suspect even the holdouts would welcome the chance to move ahead if we go about this business in the right way.

MAILER. Is it important to have everybody in at the start?

JAMES. I'm not sure that it is, really. If even half a dozen of us pitch in and begin to get somewhere, the rest will be attracted, won't they?

MAILER. I suppose so. The main thing is to get that half dozen under way. If you show some steam and a few results, the hold-outs may lose their suspicions!

JAMES. O. K. Let's set it up this way: I'll ask those who showed real concern to meet with you and me on Friday—if you're free that afternoon—and we'll lay plans. We can try then to get at the real problem.

MAILER. It may be better to issue an invitation to the whole group, otherwise some who are interested will feel left out.

JAMES. Right you are. Let's say 2:30 Friday in the lounge. I'll have coffee ready.

MAILER. And some flowers!

JAMES. By all means.

MAILER. Now, how about the minutes of this duet we've sung today?

JAMES. I've jotted down most of our points, and Sally can type them up as a guide. Ed, I can't tell you how much I appreciate your time and interest. This whole business excites me because I see in it the first real opportunity to get some meaningful in-service study under way. I'd hate to muff it. You've pitched in a hatful of important ideas about how an outsider should, and can, function. I just hope now that you and Valley Teachers will be the ones to help! You certainly fill the bill you outlined a few minutes ago.

MAILER. Frankly, I hope we're the ones, too, Bill. But no matter who comes in, the ball is rolling and that's the big thing. I'll be getting along. See you Friday at 2 o'clock, and we'll find out which way the wind is blowing. By the way, better ask if your people would like me to show up Friday. Want to get off on the right foot, you know!

JAMES. Will do! So long, Ed. And thanks again.

Getting Instructional Materials in Use

By IMELDA STANTON
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Idlewild School
Memphis, Tennessee

TEACHERS have known for years that a classroom comes alive when the learning situation arouses the interest of the pupils. The use of suitable instructional materials enables the child of limited background, as well as the child of full background, to visualize more meaningfully and to comprehend the concepts being built more fully. An ordinary milk bottle may tell more about liquid measure than a page of explanation; a baby's wooden block and a croquet ball may give a better conception of a cube and a sphere than words.

The Development of a Program

We have worked hard to make instructional materials available to the teachers in Idlewild School.[1] The present program began in April 1946 when the superintendent of schools gave us permission to accept a sound projector bought by the parent-teacher association. He wrote: "I would be delighted personally if some school would demonstrate the value of films and slides to our educational program. You have a chance to make a very fine contribution to the school system."

With this encouragement the Idlewild faculty carefully charted a program using films available from the state university rental library and the library of a commercial firm. Then in the fall of 1947 the board of education began a central film library.

In the school itself, until the fall of 1953, the program was under the immediate direction of the principal. She ordered the films and with the help of one other faculty member operated the projector.

[1] Idlewild is an elementary school in the Memphis City School System. It has an enrolment of 630 children in kindergarten, Grades I thru VI, and two classes for hard-of-hearing children. The faculty consists of 22 teachers and the principal.

Also, she directed previews at weekly faculty meetings so that lesson plans could be made.

Today Idlewild School has a well-organized and successful audio-visual program with a coordinator, committee of grade representatives, and a sound projectionist for each grade. Under the capable direction of the coordinator, the committee has popularized the audio-visual program with the rest of the faculty until it is integrated with the curriculum and is practical in execution. Idlewild School is among the schools that preview films for the central film library.

With assistance from a cooperative parent-teacher organization Idlewild's instructional materials include:

1. Two 16 mm sound film projectors and a microphone
2. Two filmstrip projectors with slide attachments
3. A filmstrip library with metal portable film boxes
4. One stationary and two portable screens
5. Two projection rooms other than classrooms where all filmstrips are shown
6. One tachistoscope with speed-i-o-scope attachment
7. Tachistoscope reading filmstrips of basic vocabulary, phrases, and sentences; arithmetic filmstrips of reading numbers, addition and subtraction combinations, and multiplication and division tables
8. Nine record players with school and individual room record libraries
9. Full set of equipment for rhythms
10. Portable radio with battery and civil defense frequency band
11. Complete filing cabinets of pictures suitable for classroom use
12. Adequate bulletin boards in each classroom and all halls
13. Ten file drawers with equipment for individualized reading
14. Stereoscopes with picture files
15. Costume chests for dramatizations
16. Large well-equipped school library and individual room libraries
17. Flannelboards
18. Twenty-one wall maps
19. Eleven globes
20. Portable television for educational programs
21. Portable solar system
22. Maico teaching set for hard-of-hearing pupils that includes a combination radio, record player, and loud speaker; 10 individually tunable earphone sets, and three response microphones
23. One set of 12 Maico individually tunable earphone sets attached to an amplifier that is connected to the 16 mm projector
24. Charts and chart racks for primary grades
25. Two typewriters, one with large primary type

26. One mimeograph machine
27. One standard duplicator
28. Eight pianos.

Getting Materials into Use

Teachers need an abundance of materials from which to choose their individual classroom needs. Idlewild has a professional library located in a secluded spot on the upper floor with convenient tables and chairs where the teachers can spend their free time browsing in the up-to-date periodicals, textbooks, and educational equipment, and planning their own programs. The filmstrip projector and tachistoscope schedules are organized to give each teacher two regular uninterrupted weekly periods in her own classroom with the equipment and the filmstrip library, all delivered by student messengers. These messengers do not have to carry this equipment a distance of more than two rooms. The teachers have the privilege of exchanging time with each other and of requesting any other available time. By this arrangement each teacher has a free choice of all films without undue exertion and loss of time in receiving them.

The full cooperation of the committee grade representatives in ordering films and filmstrips from the board of education lending library has made possible selections and timing of films to correlate with the room needs. After the grade representatives have selected the films and filled out the dates, the coordinator checks for unnecessary duplication and unbalanced spots. Blanks are kept available at all times for last-minute rush orders.

A regular schedule provides for all sound films to be shown at separate grade levels. So that the classroom teacher may keep informed, a complete program of all films scheduled is kept available for reference. This record makes it possible for the classroom teacher to prepare the children for seeing the picture and integrating it with the other classroom activities.

Demonstrating Good Practice

The inservice education meetings seem to be the logical time to introduce the latest technics and newest equipment. Recently,

before filmstrip projectors were to be purchased, the coordinator arranged for trial use of the machines. After the coordinator had become familiar with the projectors, she was ready to demonstrate them at the next inservice education period. Since all the faculty wanted to try the new machine, a schedule was set up to allow a fair trial by each member. After weeks of use in the schools, the faculty agreed to purchase two projectors, one for the primary department and one for the intermediate department.

Exchanging Experiences

The coordinator and the committee representatives invite other teachers to visit their individual classrooms when new equipment and new technics are being used. During the trial period for the tachistoscope attachment, the coordinator, who is a specialist in reading, demonstrated reading technics to other teachers and their pupils with her own second-grade children. The visiting children, observing from their seats around the room, were fascinated and eager to return to their own rooms for a similar lesson.

Other faculty members have some special talent and they are visited in like manner, on a voluntary basis. The entire school benefits from one unusually gifted sixth-grade teacher's outstanding work in teaching her children to read maps creatively. This class is always popular. A first-grade teacher has an especially effective arithmetic technic with a flannelboard. On rainy days another first-grade teacher, who is an accomplished pianist, conducts rhythm in the auditorium.

But there is always that difficulty when machines fail to operate according to schedule. The filmstrip gets stuck in the projector or the light burns out and the classroom teacher finds himself unable to find the trouble or to repair it. Then the coordinator is called for emergency help. In order to be able to go at a moment's notice on these good-neighbor missions, the coordinator guides her own children to work independently in her absence. Also, responsible older children from the safety council are always available if the coordinator or committee members need them.

Each group of teachers on the same grade level works together with its committee representative on exchanging experiences. In each of the second- and third-grade groups one teacher, especially

trained in remedial reading technics, takes all the remedial reading children from her grade level to her own room for tachistoscope practice on basic vocabulary, phrase and sentence reading, and development of good visual habits. During this period the advanced children from these two rooms visit the other rooms for reading activities appropriate for their stage of progress.

Exhibiting Material

Our professional library displays catalogs, samples, and lists of new materials. Good professional textbooks stimulate modern technics and unusual routines. One fifth-grade teacher found Kottmeyer's *Handbook for Remedial Reading*[1] most helpful in organizing her reading groups. The recent college graduates donate their college texts to our collection. Flash cards, prefix and suffix wheels, and other devices may be borrowed when needed.

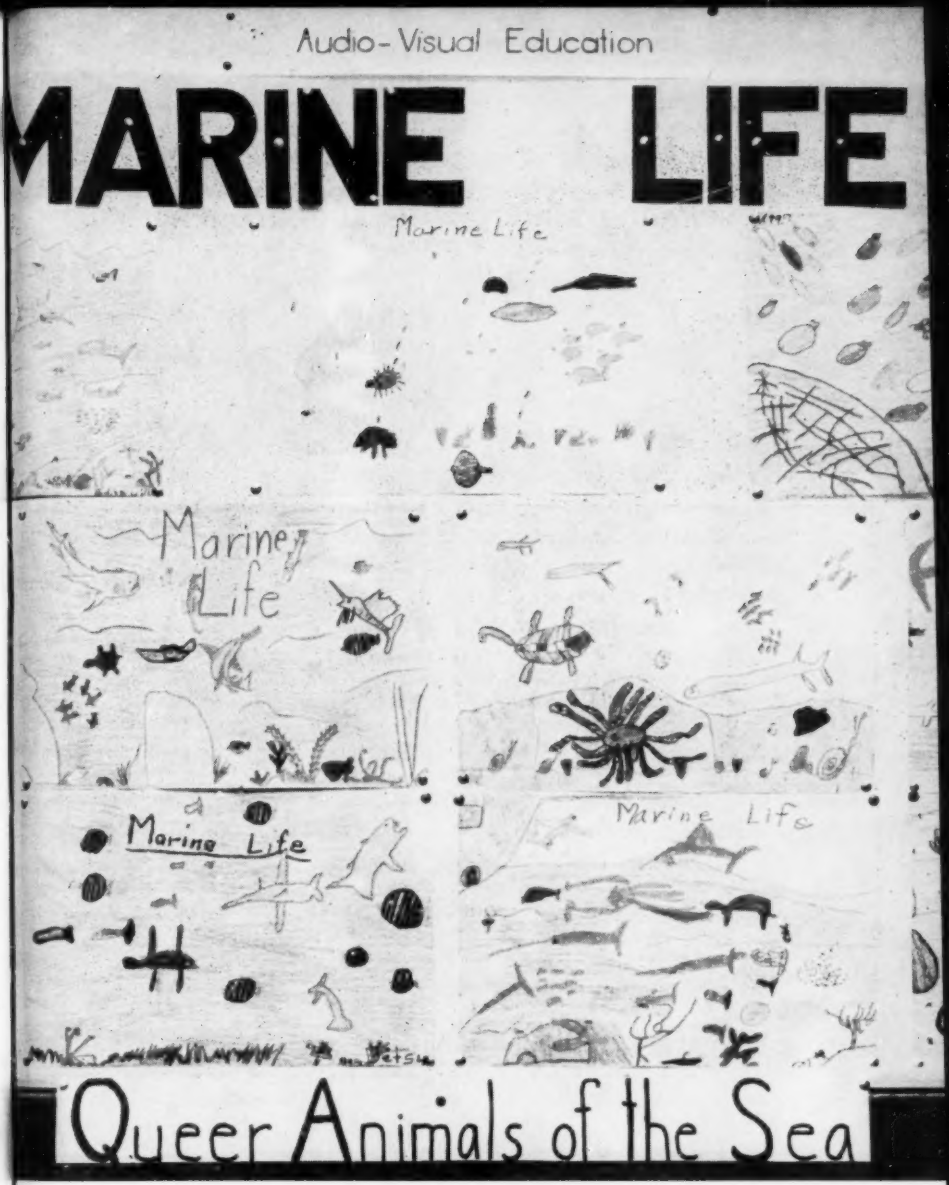
When the individual rooms have had unusually good results on their follow-up activities from seeing a moving picture in the auditorium, they enjoy having a place to display their work. These follow-ups may take the form of discussions, written stories, dramatizations, and art work. Some of these items may be posted on a special audio-visual bulletin board near the school entrance.

Exhibits on the bulletin board are changed weekly with each room having an assigned time in which the pupils may display their work. The children look forward with eagerness to seeing each new exhibit, and the teachers use it to motivate their classes.

Showing Films Well

Some pitfalls may be avoided if a few good procedures are followed. All films must be closely coordinated with the individual classroom needs or special activity. If a film is used just because it is in the building that day, it only kills time. Each presentation should be preceded by careful planning. After familiarizing himself with a preview of the film, the teacher maps out his purposes in showing the film, skilfully motivates his children, and alerts them for the points they are to notice.

[1] Kottmeyer, William. *Handbook for Remedial Reading*. St. Louis: Webster Publishing Co., 1947. 179 p.



Ted Bruehl, Photographer, Memphis, Tennessee

The second grades, when beginning "Sea-Shore Stories," needed to build a concept of the phrase,* queer animals of the sea, *before reading it in their basic text.

Developing Materials for Independent Work

By MARY BROWNING
Supervisor
and ADA O. SILLINGS
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Louisville, Kentucky

CHILDREN of today live in a complicated world of crowded homes, classrooms, playgrounds, streets, shops, and highways, and the teachers carry heavier loads than ever before. Because of their concern for these conditions, several Louisville educators working together on a steering committee decided to examine this question: How could tensions be reduced in the classroom and more happiness and successful living together be created?

Early in the planning, these questions came up:

1. Were teachers assuming too much responsibility in securing for children basic learnings in various subjectmatter fields?
2. Were the objectives meaningful and purposeful enough for the children?
3. Could not pupils measure their own progress?
4. Were pupils being made conscious of the part they could take in helping each other to progress?
5. Could not small pupil-teacher groups be organized in classrooms to work with practice or drill materials independently, after teacher-directed lessons had been completed?
6. Should not the group activities be formed gradually as groups showed gains in self-control and social habits, thus earning the right to work in a group?
7. Could not acceptable standards of what constitutes good order be set up by the pupils and teacher?
8. Could pupil-teachers be responsible for maintaining standards of order?
9. How and by whom should the work be checked?
10. Could the subjectmatter fields of reading, literature, spelling, phonics, social studies, science, and arithmetic all be considered?

After careful deliberation the committee agreed to develop types of games and exercises and experiment with them in the classroom.

Louisville Public Schools

"Know your city" is the slogan of these pupils who are identifying places of interest in Louisville as part of their work in the social studies.

The Program in Action

While the teachers on the committee initiated work in their own classrooms, they also contacted all members of the faculty in their school. Soon fellow-workers in the building caught the spirit of things and began trying out practice materials in the independent group way. Also, thru bulletins sent from the central office and thru telephone calls from interested workers, the work spread in interest and intensity until many teachers in other schools were experimenting. The text, *The Teaching of Reading for Better Living*,[1] served as a helpful guide.

As supervisors and principals noticed desirable activities, the teachers were asked to conduct observational lessons. Lack of seating capacity in classrooms necessitated regional meetings where one teacher, with all pupils present, demonstrated the method to 20 to 25 teachers.

When all 12 meetings had been concluded, some teachers who had not been able to attend all sessions requested that a compilation be made of the best materials used in each observation. A bulletin, sent from the central office, called for contributions. So many examples began pouring in that the steering committee decided to put them on display where all teachers could come and view them before they were organized for publication. Thus followed an exhibit of games and exercises taken from reading, spelling, language, literature, science, arithmetic, and social studies. Teachers worked with great zeal in producing, mounting, and displaying the work attractively. The exhibit was viewed by other teachers, principals, parents, and children from all over the city. Even members of the schoolboard were interested visitors to the display. The results of the display were so helpful that each contributor felt well repaid for his work.

At the outset of putting examples into practice, the greatest emphasis was placed on reading. The committee recognized its importance, knowing well all the demands for reading skills that are placed upon children. The interest spread, however, until all areas were stressed.

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[1] Pennell, Mary E., and Cusack, A. M. *Teaching of Reading for Better Living.* Boston: Houghton Mifflin Co., 1935. 469 p.

Louisville Public Schools

Science can be fun when pupils can play games of this kind with each other. Note the boy placing a picture of seeds in the correct pocket on the chart.

Evaluation of Program

Many reactions to the program were collected from teachers, pupils, supervisors, principals, and parents. Each group saw certain values in the undertaking:

1. Comments of teachers
   a. Provides opportunities for a transfer of learning, for it was found that a child who learned to work well in a classroom had the ability to work well in other group situations
   b. Provides gains in social skills
   c. Banishes disciplinary problems and increases attendance
   d. Supplies added practice in a more thoughtful kind of reading
   e. Instils orderly habits of work
   f. Allows children to advance on their own level and to find success, thus leading to more maturity and giving them a keener sense of security
   g. Encourages children to work independently of the teacher
   h. Broadens and enriches the child's knowledges and skills
2. Comments of children
   a. This is the "fun way" to learn.
   b. I like to play "teacher" and help other children.
   c. I think it's fun to make up new games.
   d. I like to work with my friends.
   e. It makes me feel responsible.
   f. It makes the day go so fast.
   g. I like to help others.
   h. This "sounding" work helps me with my spelling.
3. Comments of supervisors
   a. The social climate of classrooms has been changed by the acceptance of important tasks by class members.
   b. Emotional disturbances, in many cases, have been eliminated.
   c. Pupils' attitudes toward learning have changed. With the game aspect uppermost, necessary repetition now has become pleasant and effectual.
   d. A mutual give-and-take pattern has been engendered that will give added power on upper grade levels.
   e. Tension has been lessened, since the work has almost become play.
   f. Teachers are relieved of so many obligations, and future teachers are in the making.
   g. Unselfish self-control is established as the pupils show serious concern for helping others.
4. Comments of principals
   a. While at the start teachers have had to work much harder preparing materials, it is a time-saver in the long run, for they are teaching children how to take care of materials and are using the same

games over and over. Proper filing methods are being worked out.

b. Some teachers are following up their standardized tests with excellent original exercises that will strengthen the weaknesses revealed by the tests.

5. Comments of parents
   a. Children like to play these games at home; the activities provide them with wholesome fun and lessen their interest in television programs.
   b. Constructive use is made of time at home.
   c. Parents get a better idea of what is going on at school.

Some mothers became so enthusiastic about the program that they took notes on activities which they themselves might employ in helping their children. They sensed the value in helping children to accept responsibility. But, if the work really is to prove successful, some special cautions should be observed:

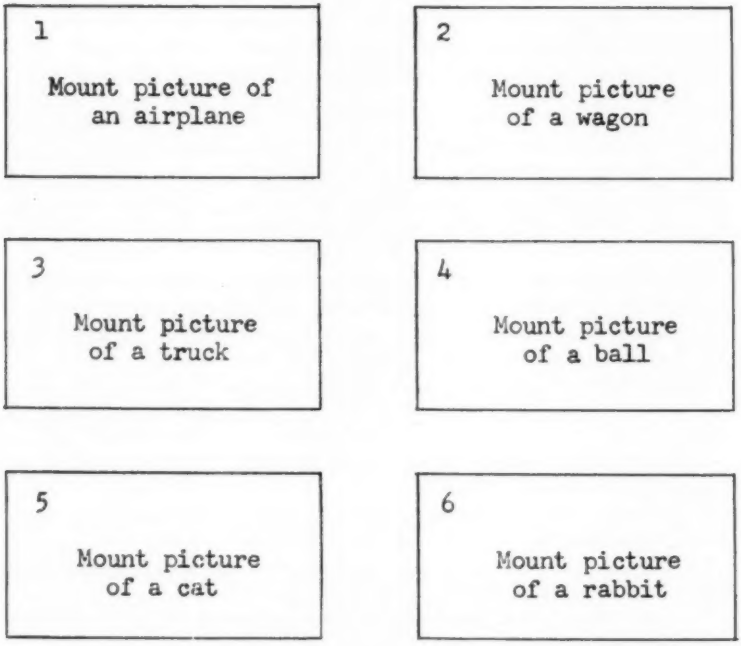
1. The work must be started under the careful supervision of the teacher, so that he may observe the habits, attitudes, and skills of the pupils.
2. Groups should form gradually as pupils gain power in self-control and earn the right to have so much freedom.
3. Standards of good order and rules of conduct should be set up by teachers and pupils and referred to frequently as gains or regressions are made.
4. Standards in reading or in any of the fields emphasized should be set up and be understood well.
5. Both the conduct and the work accomplished in the group should be carefully checked.
6. The teacher must make the report on the accomplishments of the group first, before a pupil-leader is allowed to do so.
7. Pupils should know how to appreciate and take care of materials.
8. Numbering devices on backs of cards used in the card games will aid in getting them placed correctly in proper containers.

These composite findings and admonitions are the sentiments of all workers engaged in the plan to make children happier, more self-confident, more self-reliant, and mutually helpful in a busy world that needs understanding leadership.

Samples of these practices, Figures I and II, are appended to this article. The Curriculum Bulletin, *Materials That Develop Independent Work Habits*, comprises 140 exercises and can be procured for $1.30 from Curriculum Department, Louisville Public Schools, Louisville, Kentucky.

FIGURE I

MATCHING PICTURES--READING-READINESS GAME
(For slow learners)

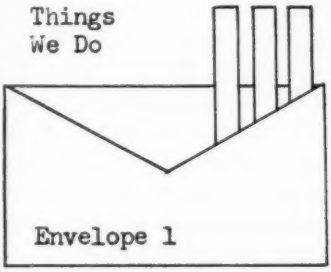


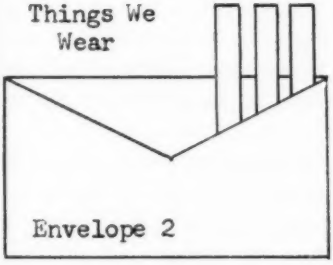
Directions: Twelve duplicate pictures are mounted on three-inch-square manila tag boards. A leader deals all the cards to the players, face down. The first player puts a card, face up, in the center. A child who has a matching card places it on top and takes both cards. This player continues the game. The player with the most cards wins the game.

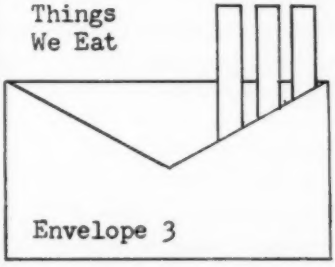
After the children have mastered this game, the next step would be to match words with pictures that have the words under them.

FIGURE II

CLASSIFICATION GAME FOR SOCIAL STUDIES III







WORD TABS:

walk
bread
shoes

Pupil-Teacher Check

Do	Wear
write	collar
look	stockings
jump	shoes

Eat
apple
cheese
bread

Materials: Heavy cardboard background, word tabs, three envelopes, and pupil-teacher check on cardboard.

Directions: Words are distributed to players. As pupil-teacher points to an item on the chart as "Things We Wear" some player who has the right card places it in the envelope. The winner is the child who gets rid of all cards first. This may be varied and played in other ways.

Exchanging Experiences thru Interclass Visits

By ROY O. SCHILLING
Administrative Assistant in Elementary Education
Decatur Public Schools
Decatur, Illinois

THE Decatur Public School System has 22 elementary schools containing 316 classrooms. The administrative assistant and assistant superintendent in charge of elementary education consult with the supervising principal of each school in the general supervision of all classrooms. Other central office staff members working directly with the elementary-school teachers are the coordinators of art education, music education, library services, and teaching aids. About 50 elementary-school teachers are new to the system each year.

Interclass visits and exchange of experiences have been practiced by teachers of kindergarten thru Grade VI classes for many years.[1] They are integral parts of the orientation program for new teachers and the inservice program of all teachers for the purpose of helping them to do a better job with boys and girls in their own classrooms. These interclass visits may focus on instructional materials as well as on other aspects of the school program. This article describes especially how the visiting program is set up.

Scheduling Visits

The dates scheduled for visiting days are very important if maximum help is to be given new teachers. Time is required for

[1] The policy of the board of education follows: A teacher may be allowed one visiting day each year with full pay. Visitation may be within or outside the Decatur School System at such place or places as present the greatest opportunity for growth in the teacher's field of work, and must be mutually agreed upon by the teacher and the supervising principal. Unused visitation days may accumulate to a maximum of three days. The plan and report of the visitation should be a cooperative enterprise between the teacher and the supervising principal. On the approval of the supervising administrator a teacher may use allowable visitation days for purposes of attending professional meetings.

teachers to become well acquainted with their pupils and the problems of instruction for their particular groups. A date too early in the school year prevents these opportunities, and a date too late does not provide the help when it is most needed. Sometime during the latter part of September or in October, each new teacher has the opportunity for one full day of visiting. A day may be scheduled for either a single grade level or a combination of grade levels, depending upon the number of teachers new at each level. Newly appointed principals also visit with the groups. The chief advantage of scheduling one day for each grade level is the opportunity it affords to see the entire day's program in action. The chief advantage of scheduling a combination of grade levels for visiting together on the same day is the opportunity to see classroom activities at the grade level either preceding or succeeding the particular one to which a teacher is assigned.

A teacher not new to the school system but who might be assigned to teach at a grade level differing from his former assignment is encouraged to visit with his group.

Each kindergarten teacher teaches two sections of children, a morning group and an afternoon group. Last year a half day of visiting early in the first semester and another half day in the middle of the year were scheduled. The chief advantages in delaying the second half day of visiting are that more time is available for teachers to learn to know their children well, and there is greater opportunity to analyze some of their more difficult problems of instruction, including the types of activities which can be planned to meet the needs of the children at the varying levels of maturity.

The worthwhileness of any visiting day for a group of teachers results from careful and detailed planning. The scheduling of a visiting day requires the cooperative effort of the visiting teachers, the principals, the general supervisors, the special supervisors, and the teachers whose classrooms are scheduled to be visited.

Leading Up to Visiting Day

Usually, during the orientation program held for three days prior to the opening of school, there are opportunities for informal discussion concerning the possibilities of visiting days. A large ma-

jority of teachers express enthusiasm and interest for such opportunities.

At the first elementary principals cabinet meeting held early in September the final dates for the required number of visiting days are scheduled.

During the first two or three weeks of the school year, the principals visit the classrooms frequently. The visits are usually short and are for purposes of answering any questions which might arise regarding materials of instruction and routine procedures, and for giving information which might help in better understanding the children. In general the aim is to support the teacher's efforts to get off to a good start.

The administrative assistant and assistant superintendent in charge of elementary education make their initial visits of the year to the classrooms about the middle of September. The primary purpose of the first visits is to plan cooperatively for the visiting days. In a rather informal conference, the teacher, the principal, and the supervisor focus their thinking upon the following questions:

1. In what subject areas do you feel the need for some help?
2. If possible to arrange, what types of activities would you most like to observe?
3. What specific technics of teaching do you believe would be most helpful for you to observe?
4. Are there particular types of teaching materials which you would like to see in use?
5. What specific problems related to your particular assignment would you like to have discussed by your fellow teachers?

Often, the answers to some of these questions have been received during the employment interview, informal coffee breaks during the preschool orientation period, and visits with the principal. The teacher's needs as seen by himself, the principal, and the supervisor help in planning the visiting day.

In making the schedule, the plan for each day includes visiting buildings that meet two or more of the following conditions: large building, small building, old building, new building, building located in an industrial section, and building located in a residential section. For each day's schedule, at least three and sometimes four buildings are visited. Thus, new teachers are given the

opportunity to get a fairly good cross-section view of the whole school system.

For maintaining good relationships and high morale among the staff, effort is also made to visit all the buildings over a period of a few years. Within the past three-year period, all except two of the 22 buildings have been visited at least once.

Working with the Principals

The following bulletin illustrates the procedure for determining the classrooms in which lessons will be scheduled for presentation:

TO: Elementary Principals
FROM: Administrative Assistant
DATE: September 10, 1954
REGARDING: VISITING DAYS FOR NEW TEACHERS

At our last meeting, dates for the visiting days for teachers new to Decatur were agreed upon as follows:

Thursday, September 30	fifth- and sixth-grade teachers
Tuesday, October 5	third- and fourth-grade teachers
Wednesday, October 13	second-grade teachers
Thursday, October 14	first-grade teachers
Thursday, October 28	kindergarten teachers

1. In order that as many buildings as possible might be visited, will you consider your first and second choices of the above dates and grade levels most suitable and convenient for visiting in your building?
2. If you have discovered any reasons for which any of these dates should not be used, please phone me immediately.
3. Will each of you consider carefully the teachers in your building whose rooms might be visited for demonstration lessons? The following factors might serve as a guide in helping you to make your considerations and suggestions:
   a. The potential contribution of the teacher to be visited.
   b. The number of times the teacher has served as a demonstration teacher in past years. If one is able to give a real contribution with relative ease and enjoys doing so, he should not be eliminated from consideration because of the repeated demonstration lessons presented. On the other hand, if one finds presenting a lesson for visitors distressing and somewhat a burden, he should be greatly encouraged, but not imposed upon.
   c. The stimulus and profit a teacher might receive from the experience of presenting a lesson, *if* he is willing and ready.

4. Your suggestions and assistance for planning successful visiting days are needed and desired. Will you please fill out the attached form and return to me by Wednesday, September 15?

After the principals have returned their suggestions, a tentative schedule is outlined for each of the five visiting days. The administrative assistant in elementary education and the principal of each building, listed in the schedules, arrange for a conference with each teacher who will present a lesson. Painstaking effort is made to meet all of the needs or desires as expressed by the new teachers. Sometimes it is not possible; it depends upon the number of visitors in the group.

Laying Final Plans

This sample bulletin illustrates how final plans for a visiting day are announced to all persons involved:

SECOND-GRADE VISITING DAY
Wednesday, October 13, 1954

VISITING

(In this space are listed the names of the visiting teachers, schools to which they are assigned, and whether or not substitute teachers are available. From this list, arrangements for calling substitutes and setting up chairs in the conference rooms and classrooms can be made.)

TO BE VISITED

_____School....	8:30 - 8:50—Discussion of plans for the morning
	9:00 - 10:00—Name of teacher...Reading
	10:00 - 10:30—Name of teacher...Science
_____School....	10:45 - 11:30—Name of teacher...Reading
	11:30 - 11:50—Discussion
_____School....	12:00 - 1:00—Lunch
	1:10 - 1:45—Name of teacher...Spelling
	1:50 - 2:25—Name of teacher...Numbers
	2:30 - 3:10—Name of teacher...Language arts and social studies
	3:15 - 4:00—Discussion

Transportation: There will be enough cars available for all to have transportation for the day from _____ School. If any of you wish to ride to _____ School, I shall be glad to meet you at the Public School Office at 8:10 a.m., Wednesday, October 13. *(Continued on the next page)*

Lunch: Plans have been made to have lunch for the entire group served at _____ School. If you do not find this arrangement convenient or desirable, will you please notify me by telephone by 4 p.m. on Tuesday, October 12, so that plans can be adjusted.

Administrative Assistant in Elementary Education

In smaller buildings the principal teaches for the visiting teacher. In larger buildings or in buildings where more than one teacher might be away on the same day, substitute teachers are provided.

Ideally, each day's schedule should provide time for discussion periods, prior to and following each lesson observed, with the demonstrating teacher directing them. Since the practice is not feasible because of the number of classrooms to be visited and time required for traveling between the buildings, special effort is made to hold at least one of the discussions. It is usually focused upon the following:

1. Composition of the class, including home backgrounds, range of abilities, range of achievement levels based upon test results, special needs, and special interests of the group
2. Technics for motivation, procedures, and achievement of goals
3. Information about the materials of instruction.

Eating lunch together as a group, either at a school or at a public eating place, provides opportunity for teachers to become better acquainted and to discuss common problems.

Evaluating Visiting Day

At the conclusion of each visiting day, the visiting teachers are asked to evaluate their experience by answering a simple questionnaire. No names are signed to the questionnaires. They may be filled out at the end of the day or at a more convenient time and sent to the Public School Office thru school or public mail. The following is a sample of a typical response:

EVALUATION OF VISITING DAY, 1954

1. What do you consider to be the most helpful to you as a result of your visiting? Please list.

New outlook—Seeing teachers as pupils do, for a change, helped me to take stock of my own mannerisms, approach, and tone of voice. As an observer rather than a participant, I became cognizant again

of the importance of creating interest and realized how dull school must be for pupils who are not drawn out.

Divergent approaches—Seeing the formal type (its gradations) and the democratic type approaches was provocative.

Physical setups—Gained new ideas in room art, interest centers, seating arrangements, and teacher-made visual aids.

2. What do you consider to be the least helpful or of little value to you as a result of your visiting? Please list.

One full day of visiting is almost too much. (See suggestion below.)

3. As a guide for future planning, would you recommend a similar day of visiting be planned for new teachers next year? Yes X No _____ If Yes, what suggestions for improvement would you wish to be considered? Please list.

Such well-planned visiting days may well be considered investments rather than expenses by Decatur administrators and supervisors. An attempt should be made to make visiting day plural as well as to plan similar opportunities for experienced teachers. Visiting probably becomes a mundane matter to supervisors, but I am sure it is stimulating to teachers who may become limited to their own rooms and buildings. Because visiting does make a long day, with little time to digest all that is given, I would recommend several half-day visiting sessions spread out over the year, and including all teachers.

Lunching together was a good idea.

Preplanning in discovering desires of visitors was wise.

Allowing time for evaluation was good.

Showing Appreciation to Demonstration Teachers

Altho there is no attempt to put on a show in presenting lessons, it is recognized that there is always need for some extra time and effort in planning and preparation if teachers are to exhibit their skills to the best of their abilities. Therefore, recognition of their cooperative efforts is made in some way. The following letter represents one way of showing appreciation:

Dear Miss _____:

Your planning for and the presentation of the social studies and art lessons observed by new teachers yesterday morning were exceptional for a teacher with only one year of experience.

To acquire within the first month of school the type and quality of rapport which you have already established with your children is clear evidence of your genuine and sincere interest in helping children learn. It was quite difficult to discern just who was having the greater amount of pleasure, the class or the teacher. The results for both were excellent.

We do appreciate very much your readiness and willingness for such an experience which I hope will prove to be both profitable and satisfying to you.

I hope, too, that you might always maintain the interest and enthusiasm for teaching that you have shown thus far.

Sincerely yours,

Administrative Assistant in
Elementary Education

In some buildings, especially the larger ones in which there are several classrooms at the same grade level, principals arrange additional opportunities for both the new and older teachers, who so desire, to exchange visits to the classrooms of their fellow teachers. Usually such visits are for one or two classes at a time and the principal teaches the class of the visiting teacher. The advantages resulting from these opportunities are the frequent, easily made contacts for sharing plans, exchanging ideas about procedures or technics, exchanging materials, and establishing excellent working relationships and faculty morale.

Visiting Days in Brief

The cooperative effort toward sharing of common interests, ideas, materials of instruction, and problems helps to make teaching more stimulating and enjoyable. The new teachers have opportunities to get an over-all view of the entire system. They become acquainted with their fellow teachers and learn of the many sources from which they can secure help with their individual problems. For the teachers not new to the system and those with only a few years of experience who sometimes lack confidence in their own abilities, the preparation of a demonstration lesson is invaluable. The principal and sometimes one of the supervisors share in the careful, detailed planning of a lesson. Clearer concepts of goals for achievement are brought into focus. Procedures or technics are refined and varied. Poise and a feeling of security are established. Thus, better learning situations are created and provided in all the classrooms.

Helping Each Other

By JOHN ADELBERT FISCUS
Principal, Greenwood School
Montebello Unified School District
Montebello, California

Now I can make some of the things I've wanted to make but never had time for." "It's fun to work together on games to use in my classroom." These and similar comments were the reactions of teachers to our inservice education program for the last year. The program was different from anything ever tried before in the district. Previously, inservice education had always been conducted on a district or area basis, but with the rapid growth of population the program was decentralized to the local schools under the guidance of the principal.

Organizing for Work

Several faculty committees guide the various professional activities during the school year. The Advisory Committee suggested that an Inservice Education Committee be organized with membership to consist of one person from each grade level. (Our school has about 1000 pupils enrolled and a staff of 32 certificated employees—28 classroom teachers, principal, assistant principal, nurse, and special reading teacher.)

This Committee went to the entire faculty for suggestions of problems of wide challenge. From some 21 possibilities, the faculty settled on "Instructional Materials for Effective Learning or Educational Gains." With the topic selected, the whole group requested the Inservice Committee to devise a procedure to follow.

After deliberating over the question, the Committee suggested that a grade level organization be used, that all teachers participate with their grade level, and that each grade level group select from the curriculum some phase of interest.

The smallest group consisted of four members and the largest group of six members. With this type of organization, the teachers

found that they became better acquainted with other teachers of the grade, and that there was a wonderful sharing of ideas, materials, and devices.

Getting into the Work

Each group planned its own meetings, held every other Monday afternoon in one of the classrooms. The host teacher who had the meeting in his room provided some type of refreshment at the opening. In addition to the host, usually a different chairman was chosen for each meeting. The teacher, who had been selected previously as the chairman, made all the necessary arrangements for supplies and equipment for the classroom being used. With the material available and the subject determined at the last meeting, it was easy to swing into the work—sometimes construction of materials and sometimes discussion of how the materials should be used.

In the Kindergarten

The kindergarten teachers agreed that more work was needed on speech improvement. Some teachers were hesitant about working on this problem because their experience was limited. One teacher who was especially competent in speech served as chairman for several meetings. This group went to magazines as a source of pictures appropriate for various sounds. During the meetings the teachers pasted these cutouts on pieces of cardboard and also put poems and sounds on the backs of these mountings for presentation to the children. Each teacher prepared a box with alphabetized dividers to store this material. After the construction was completed, teachers took turns, with the other teachers acting as pupils, demonstrating the use of these pictures.

In the Third Grade

The third-grade teachers concentrated their efforts on materials for arithmetic, reading, social studies, and spelling. One game used was called "What Do You See?" The purpose of this game

is to create interest in reading thru enjoyment, recognizing objects, building vocabulary. It stresses visual perception.

Another device, designed for helping children to be more careful readers and to stimulate interest in daily reading, was a score card of heavy paper divided into circular sections from the outside of the circle to home base at the center of the circle. Each child who plays has a small card with his initials. He reads as far as possible without a mistake, thus advancing from section to section. This game stimulates careful reading and eliminates careless glancing and guessing of words. It is a good device to use on reviewing materials. In a similar way, materials were prepared in the other grade groups.

Evaluating the Work and Planning for Next Year

While an exhibit and complete evaluation by the staff is planned before the close of school, the Committee has already recommended that this type of program be continued next year. The strength for this recommendation comes from values already realized such as these:

1. Teachers have learned more about how to produce and how to use classroom materials.
2. Teachers have improved their attitudes toward certain information and have gained confidence in using materials.
3. Teachers have more fully realized the principle of really helping children where they find them. They have exchanged ideas on how to help the child with outstanding ability as well as how to help the child who is average or the one who is slow.
4. Leadership has appeared where it was not apparent when the project started.
5. The course of study has been re-evaluated.
6. The staff has become a more cohesive working group.
7. There has been participation by all.

In this program the role of the principal has been to encourage teachers to attempt new projects, accepting those ideas that prove themselves, and discarding those that do not work. The children of the school have benefited from this strengthening of the school program.

Inservice Education on Instructional Materials

By MARY G. MONTGOMERY
Principal
Westlawn School
Mobile, Alabama

THE modern classroom is quite a contrast to the log of Mark Hopkins. Yet Hopkins and the presentday classroom teacher have something in common. The source of instructional materials for Hopkins was the world about him, limited only by his concepts of time, space, and materials. Likewise, the source of instructional materials for the teacher today is the world about him, but almost limitless because of modern knowledge of time, space, and material. Today, the teacher must choose carefully from many teaching aids. His job is to select the best materials for making a particular learning situation a rich experience for boys and girls. Thus, it becomes the responsibility of the elementary-school principal to stimulate his staff to achieve greater competence in the selection and use of materials of instruction.

An Inservice Education Program

Teachers need time for preparing themselves to use instructional materials. We have found time this year thru our regular weekly faculty meetings. On Monday, the regular faculty meeting day, all children are dismissed an hour early. The teachers then spend this hour and an additional hour on the faculty inservice program.

Plans for our faculty inservice program are laid in the spring for the following year. A chairman, a secretary, and a steering committee of three are elected by the teachers to plan the program for the next year. Topics for study are agreed upon by the entire faculty.

In our school, as perhaps in others, many materials of instruction were not being used because the teacher did not know that

they were available. Realizing this, the steering committee developed plans for giving each teacher an opportunity to become familiar with these materials.[1] The steering committee suggested that the faculty be divided into four committees: library, music, films and filmstrips, and textbooks. Since each teacher should know something of the materials available in the various subjects, it was further suggested that membership on the committees change each quarter. In order to give some continuity to the study, the same chairmen served thruout the year. Thus, each teacher, except the four chairmen, had an opportunity to serve on each of the four committees. The committee chairmen were chosen because of their special training or abilities in the area.

Work of the Library Committee

Altho all instructional materials except the textbooks are housed in the central library, the library committee limited its work to children's books, professional books for teachers and parents, magazines, pamphlets, and flat pictures and other vertical file material. Thruout the year this committee has accomplished these pieces of work:

1. Processed all new books, getting them ready for circulation
2. Studied shelf lists to determine weaknesses in subject areas and types of books
3. Mended books
4. Brought the vertical file up to date, deleting obsolete materials and filing new materials
5. Compiled the book and magazine order for the following year from titles suggested by all teachers as they saw their needs
6. Worked with volunteer mothers who serve each day in the library
7. Listed and ordered free and inexpensive material.

In doing this work, teachers had an opportunity to become familiar with materials in the library. We have no full-time librarian. The sixth-grade teacher serves as librarian and directs the sixth-grade pupils who serve as pupil librarians. In addition, the PTA Library Committee has a volunteer mother in the library each morning and afternoon to assist pupils in selecting books and materials.

[1] On alternate weeks the study centers around the improvement of the physical education program and the selection, organization, and use of instructional materials.

Work of the Music Committee

The music committee confined its study to records. It began its work by studying ways to improve cataloging and filing records. It was also faced with the task of getting 100 new records, a gift to the school, ready for circulation. This committee developed a simple method of filing the records and albums and set up cross references for information on the suitability of the record to a grade, typed the records such as rhythm, folk dance, or waltz, and determined their purpose such as listening, holiday celebration, or dancing.

This committee also made an inventory of records for pointing out areas of shortage, secured a large record cabinet for storage, listened to many records for the purpose of suggesting those that should be purchased, and then made up the order for the following year.

Work of the Film Committee

The film committee was concerned primarily with filmstrips in the school but did study the 16 mm films available thru the countywide materials center and other nearby sources. This committee ordered all 16 mm films used in the school. The chairman sponsored the student projector club and made arrangements for films to be shown in the classrooms when teachers requested them.

The committee also improved the method of cataloging filmstrips, made an inventory of those on hand for finding areas not covered, grouped and stored them by interests and subject areas, and studied catalogs in order to recommend some for purchase for the next year.

Work of the Textbook Committee

The state furnishes textbooks for Grades I thru VI. A recent addition to our school building gave us a well-planned storage room for these books. Previously, textbooks had to be stored in the classrooms. Now teachers have an opportunity to browse in the storage room and to find materials above and below the grade level which they need to meet individual differences.

The textbook committee has concerned itself with a study of state-adopted texts in an effort to find those most suitable for our curriculum. Tabulations were made by subject and grade level to check on the balance of the coverage and the adequacy of the supply.

This committee also studied readers for the purpose of earmarking certain sets for particular grades. For instance, a set of preprimers, primers, and first-grade readers was earmarked for second grade, and a different set, with the addition of two levels of second readers, was earmarked for the third grade. This procedure provides reading material on various ability levels and prevents two teachers from using the same text in consecutive years.

Another function of this committee was to recommend the kinds and number of texts for purchase for the next year after it studied the probable enrolment, areas of weakness, and titles suggested by the teachers. It also assumed the responsibility for checking books in and out, and prepared the book section of the annual report for the superintendent.

More Use

Every six weeks the committees held a meeting at which each group exchanged findings with the other groups. Interesting displays and demonstrations were special features of these meetings.

As a result of our faculty inservice program, each teacher has had an opportunity to learn more about the materials available in our school. When he knows the materials available, he is likely to use them. This has been proved by the much wider circulation of all types.

CHAPTER
ELEVEN

Appraising the Value of Instructional Materials

THE final chapter is appropriately on evaluation altho the Yearbook Committee recognizes that evaluation should take place during all the stages of progress in learning activities. It differs from discussions that focus on evaluating pupil progress by emphasizing evaluation of the place of instructional materials. The chapter, consisting of one article, takes the reader to the area of inference and its application in evaluation.

Perhaps the quickest way to orient the reader to the chapter is to pass on some passages from the correspondence of the authors with the Yearbook Committee: "Many teachers consider observed behavior of pupils (scores on tests for example) as evaluation of pupil progress rather than merely the evidence from which the evaluation may be made. Furthermore, many teachers do not question the validity of instructional activities in producing pupil growth. If pupils learn, teachers assume without question that the instruction did it. If they do not learn, teachers assume that the instruction is OK but that there is something wrong with the pupils.

"We have tried in this article to show the errors of these assumptions or inferences. We want teachers to look for actual cause and effect relationships, if they exist, between the instructional activities and the growth of the pupil."

Evaluating the Effectiveness of Instructional Materials

By CLOY S. HOBSON
Professor of Education
and ROBERT W. RIDGWAY
Assistant Professor of Education
University of Kansas
Lawrence, Kansas
and CHARLES E. JOHNSON
Associate Professor of Education
University of Illinois
Urbana, Illinois

INSTRUCTIONAL materials in and of themselves have no educational value. The finest library, the best collection of instructional films and filmstrips, or the most accurate and readable maps and globes are useless when kept apart from children. It is only as pupils have opportunities to use instructional materials in meaningful situations that such materials take on educational value.

Growth in knowledge, skills, and attitudes takes place when a child actually participates in an activity. Teachers, if they are to guide pupil growth, must provide appropriate activities. The particular objectives will be met only to the extent that pupils participate in activities that are appropriate for progression toward these objectives.

Certain materials lend themselves best to certain activities, and activities may be carried out only with the appropriate materials. Educational activities and materials are, therefore, so interrelated that the effectiveness of materials of instruction can be determined only thru careful and creative examination of the pupils before, during, and after their use of these materials in learning activities.

Principles of Evaluation

This article emphasizes evaluation of instructional materials and methods, not evaluation of pupil progress. From the interrelationships described above it is evident that the evaluation of

pupil progress must precede and form the basis for the evaluation of the materials and methods. Some general principles governing the evaluative process should be understood before specific evaluative methods are presented.

The teacher can provide only the opportunity for the pupil to learn; the pupil himself must do the learning. The teacher's part in the learning is to organize an effective educational environment consisting of physical and social features and of atmosphere, situations, and activities. The pupil's part is his reaction to or interaction with that environment. He learns because he has actually had experiences, stimulated by the environment, that were appropriate to the achievement of the desired outcomes. The teacher must discharge his responsibility in organizing the environment so as, in fact, to stimulate appropriate pupil responses for the realization of the desired outcomes.

Measurement of pupil status is of a continuous process thruout the instructional period. The teacher must know, first, where the pupil is in his development before instruction begins. Next, he must know whether the pupil, during the instructional period, is achieving behavioral changes in the direction of the desired outcomes. Last, the teacher must know the status of the pupil's development at the end of the instructional period. From the difference between his status at the beginning and his status at the end, the teacher estimates the pupil's progress. Whether or not this progress is occasioned by the instruction is a matter of inference, some aspects of which are considered in succeeding principles.

Instruction has value as it helps pupils move toward desired outcomes. From the behavioral evidence supplied by the pupil as the teacher applies various measuring technics to discover pupil progress, the teacher may infer the success or failure of the instructional materials and methods. Continuous evaluation thruout the instructional period may show that the materials and methods employed are not aiding some pupils to move toward the desired outcomes. In such cases in order to secure better results the teacher may, in the middle of the period, change to more appropriate materials and methods before too much valuable time is lost. Then, if the results are favorable, the teacher might infer that the second set of instructional procedures was more valuable than the first.

Extreme care must be taken in inferring the value of instructional materials and methods from pupil progress. A teacher may infer a cause and effect relationship that does not exist. The pupil may have learned without the influence of the classroom instruction. Other influences may have contributed to or interfered with learning. Some cautions to be observed are stated in the expositions of the next two principles.

Each pupil is the product of a variety of factors which condition his reaction to the instructional environment. These factors fall into five broad classes: (a) mental, (b) physical, (c) emotional, (d) experiential, and (e) environmental. Without careful consideration of the unique syndrome of factors which condition a pupil's reaction to the learning situation, the teacher may wrongly infer pupil progress from instructional materials and methods.

The materials and methods of instruction, tho perfectly good on other occasions, may fail to stimulate appropriate pupil activity in a new situation for one or more reasons. Some of these reasons may be unreadiness of the pupils, faulty use of the material, physical conditions of the pupil or the environment, or social environmental influences.

Procedures for Evaluating Instructional Materials

A tenable plan for the evaluation of instructional materials and methods, based on the principles stated above, follows:

1. Determine the status of the pupils with regard to the objectives before undertaking the activity.
2. Check continually during the period of instruction to determine the extent to which the pupils can and actually do participate in the activity.
3. Determine the status of the pupils with regard to the objectives at the close of the activity.
4. Determine the extent of pupil progress—the difference between status before and status at the close of the activity.
5. Infer the cause and effect relationship between the use of the instructional materials and pupil progress toward the objective.

In the following sections, evaluative procedures for determining the effectiveness of instructional materials in the classroom are described in three different activities all centered around the theme, "How man supplies his needs." Because space is limited, each

situation concerns only one objective, and each suggests but a few of the possible means by which the evaluation may be made.

In a Second Grade

A second grade may have a unit called "Where Does the Bread We Eat Come From?" Among the several objectives of this unit one may be *to learn how bread is made.* One of the activities directed toward the achievement of this objective—the use of a community resource as material and a field trip as method—may be a visit to a bakery including the preparation for the trip and the discussion of it afterward. The problem is to determine the value of the resource in achieving the objective.

Four devices are suggested:

1. A checklist of knowledge and understanding used informally before and after instruction; items suggested by both pupils and teacher, such as:
   a. What is bread made of?
   b. How are these ingredients mixed together?
   c. What is done with the mixture after it is mixed?
   d. When is the bread baked? Where? For how long?
   e. What is done with bread after it is baked?
   f. How do we get the baked bread?
   g. Can bread be made at home?
2. Teacher observation of pupil participation during the activity guided by such questions as:
   a. How much interest do the pupils exhibit in the activity? What causes this interest?
   b. To what extent and in what particulars do they actually participate?
   c. What evidences are there of freedom and enthusiasm in participation?
   d. What significant contributions do the pupils make to the common project?
   e. What questions do they ask that seem to indicate understanding of facts and interrelationships of facts?
3. The pupils' opinions of the value of the resource secured by asking such questions as:
   a. What did you like about the trip to the bakery?
   b. What didn't you understand about what you saw and heard?
   c. What did you learn that was new, that you had not known before?
   d. What can you tell other people about how the baker makes bread?
4. Teacher measures of pupil learning by evaluation of such pupil completed materials as:

a. Pupil-made experience charts
b. Drawings or paintings
c. Scrapbooks
d. Sequence drawings as in comic strips.

From the evidences gathered by the four types of devices, the teacher may infer the value of the resource, as employed in this situation, in achieving the objective with these children.

In a Fourth Grade

A fourth grade may have a unit called "Where Do We Get Our Clothing?" One of the several objectives of this unit may be *to learn how cotton clothing is made.* One activity may be viewing a film such as *Making Cotton Clothing.* The problem is to determine the value of the use made of the film in achieving the objective.

Among the evaluative procedures which may be used are the following:

1. A checklist of knowledge and understanding used informally both before and after instruction. Possible items may include:
   a. Why should we want to make clothing in factories rather than at home?
   b. What kinds of jobs do people work at in making clothing?
   c. Why is it necessary in factories to make several dresses just alike?
2. The teacher may ask himself questions to structure his observation of pupil participation during the instructional period.
   a. During the viewing of the film, questions such as the following may be asked:
      (1) Does the film present material on the proper level and with appropriate detail for the understanding of these pupils?
      (2) How much interest do the pupils show in the film? What is the basis for this interest?
      (3) Does the film provide information which will assist the pupils in arriving at answers to their questions?
      (4) Does the film raise questions in the minds of pupils which will stimulate critical thinking in the discussion period to follow?
   b. During the discussion period following the showing of the film, appropriate questions may include:
      (1) Do the pupils show interest in the problems discussed in the film?
      (2) Are the pupils able to make use of the information provided by the film in arriving at answers to their questions?

(3) Do the questions they ask seem to indicate understanding of the facts and the interrelationships of facts?
(4) To what extent and in what ways do the pupils participate?
(5) Do the pupils seem to extend their thinking beyond the limits of the film?

3. The teacher may secure from the pupils their opinions of the value of the activity thru such questions as:
   a. What did you learn from the film that you had not known before?
   b. What did you not understand about what you saw and heard?
   c. What can you tell some other person about how cotton clothing is made?
   d. What did you think was good about this activity?
4. The teacher may examine the product of the pupil's work by procedures such as:
   a. Observing the conversation and oral participation of pupils
   b. Examining art work for indications of extent of knowledge and clarity of understanding
   c. Evaluating written work dealing with the process
   d. Checking pupil-made models, displays, and charts to determine the pupils' understanding of the process.

In a Sixth Grade

A sixth grade may have the unit, "Houses Old and New." Among the several objectives of this unit one may be *to acquire an understanding of why houses in various parts of the world are different.* One of the activities directed toward the achievement of this objective may be reading the chapter of the textbook which contains related content. The problem is to determine the value of the use of the textbook in achieving the objective.

As a first step toward the fulfilment of this objective, the teacher may pose the following problem for the class, "Why are houses in various parts of the world different in construction and design?" Thru the discussion which follows, the teacher may discover and record what the children know and do not know about the problem.

The pupils might then be given the opportunity to find the answers to their questions in a textbook chapter entitled "Houses Around the World." Next, thru discussion, the teacher may note the extent to which pupils are able to find the answers to their questions.

Various devices could be used in this situation:

1. The teacher may use a multiple choice test to determine the extent of pupil knowledge. Typical items may be:
   a. Houses are most likely to have basements
      (1) in wet climates.
      (2) in hot climates.
      (3) in cold climates.
      (4) in dry climates.
   b. Peaked roofs are most likely to be found in places which have
      (1) hot wet climates.
      (2) cold wet climates.
      (3) cold dry climates.
      (4) hot dry climates.

2. The teacher may prepare a checklist for his observations of the pupils' behavior during the study period. Typical items may be:
   a. To what extent was the vocabulary level of this textbook suited to that of the children?
   b. To what extent were the children able to use the pictures, diagrams, and charts which were provided?
   c. To what extent were the children able to use the suggestions in the text for answering questions not answered directly by the text?

3. Thru discussion with the pupils or by means of a pupil-completed questionnaire the teacher might determine the pupils' ideas with regard to the value of this textbook. Typical items might be:
   a. To what extent was the textbook useful in answering your questions?
   b. To what extent did the textbook give you ideas which were helpful in answering questions for which no direct answers were given?
   c. To what extent did the textbook have a good list of other books and articles which could be used in answering those questions not directly answered in the text?

Cautions in Inferring Cause and Effect Relationships

Two cautions a classroom teacher should observe in attempting to determine whether pupil progress has actually been caused by a particular instructional activity or by some other cause are given here. The teacher, first, must assure himself that the measure of pupil progress is accurate by:

1. Making sure evaluative procedures are valid and reliable
2. Using several samples of pupil behavior as evaluative evidence
3. Interpreting the evidence of pupil progress accurately
4. Considering all significant facets of pupil growth

5. Making due allowance for the subjectiveness of observations and records of observation
6. Avoiding use of terms that may be misinterpreted.

Second, the teacher must take care to determine the actual cause and effect relationships between instructional activities and pupil progress by:

1. Recognizing that the observed behavior is only a part of the pupil's total development
2. Basing inferences on more than one source of evidence of pupil development
3. Avoiding bias or prejudice in selecting and giving appropriate weight to all the evidence of pupil development
4. Discovering whether the instructional activities or some other pupil experiences were responsible for the measured pupil progress.

Thus, inferences as to cause and effect relationships can be no more accurate than the measures of pupil progress and the validity of the teacher's reasoning as to those relationships.

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